# Conference Proceeding

# INUMDC-25

## 2nd International Multidisciplinary Conference

## Organized by:

## Iqra National University Peshawar

## 18th 19th September, 2025

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# CHANCELLOR'S MESSAGE
# Mr. Obaid Ur Rehman

In the name of Allah, the Most Gracious, the Most Merciful.

It has been a matter of great pride and honor for IQRA National University, Peshawar, to successfully host this important academic conference at the Main Campus. The participation of distinguished scholars, researchers, faculty, and students made this gathering a meaningful contribution to the academic community.

A highlight of the year has been the registration of our Office of Research, Innovation and Commercialization (ORIC) with the Higher Education Commission of Pakistan. This milestone strengthens the University's capacity to foster research, promote innovation, and build collaborations with industry and society. ORIC now serves as a bridge between knowledge and practice, ensuring that our research aligns with national and international standards.

This year has also been a significant one in terms of academic collaboration. IQRA National University proudly took part in a conference jointly organized with UET Peshawar, reaffirming our philosophy that universities must not work in isolation but in partnership. Through such academic exchanges, knowledge is debated, refined, and translated into practical solutions for the challenges faced by society.

The journey of INU, from its establishment in 2000 to its charter in 2010, and the expansion to Swat and Mardan, reflects a commitment to quality education and vibrant research culture.

I deeply appreciate the Vice Chancellor, organizing committee, faculty, and volunteers whose efforts made this conference a success. May its outcomes continue to inspire innovation and academic excellence.

**Mr. Obaid Ur Rehman**

**Chancellor Iqra National University Peshawar**

# VICE CHANCELLOR'S MESSAGE
## Dr. Malik Taimur Ali

It has been a matter of great pride for IQRA National University, Peshawar, to organize this important academic conference, which brought together scholars, researchers, and students to share their knowledge and insights.

Events of this nature play a vital role in fostering intellectual exchange, encouraging debate, and inspiring innovation—values that lie at the heart of higher learning. Since its establishment in 2000 under the affiliation of IQRA University Karachi, and the attainment of its independent charter in 2010 from the Government of Khyber Pakhtunkhwa, the University has remained committed to growth, excellence, and accessibility in education.

The opening of the Swat Campus in 2019 and the ongoing development of the Mardan Campus reflect not only an expansion in infrastructure but also a sustained effort to make quality education more widely available. In an era marked by complex global and local challenges, higher education must place research and innovation at its core.

This conference served as a testament to the University's commitment to providing platforms where new ideas are explored, collaborations are encouraged, and solutions are sought for the benefit of society. Special appreciation is due to the organizing committee, whose dedicated efforts ensured high academic standards and meaningful contributions to scholarship.

May the outcomes of this conference continue to inspire fresh directions in research and enduring partnerships.

**Dr. Malik Taimur**

**Vice Chancellor Iqra National University Peshawar**

# CHAIR OF THE CONFERENCE MESSAGE
## Prof. Dr. Sheeraz Ahmed

It is a matter of pride that this academic conference was successfully organized under the banner of IQRA National University. As Chairman of the Conference, Director of ORIC, and Campus Director of INU Swat Campus, I am gratified to note the active participation of scholars, researchers, and students who contributed to this important intellectual exchange.

The event reflected the University's commitment to research, innovation, and collaboration. A key milestone in this journey has been the official registration of the Office of Research, Innovation and Commercialization (ORIC) with the Higher Education Commission of Pakistan. ORIC is now actively engaged in initiatives that connect academia, industry, and society, translating knowledge into practical benefit.

To ensure quality, all submissions underwent a peer-review process, and selected contributions will appear in reputable journals. This not only provides well-deserved recognition to our researchers but also extends the impact of their work nationally and internationally.

Conferences of this nature strengthen networks, generate dialogue, and inspire future research. I extend my sincere appreciation to the organizing committee, reviewers, and participants whose efforts made this event a success. May the collaborations initiated here continue to grow and bring lasting academic contributions.

**Dr. Sheeraz Ahmed**

**Chair of Iqra National University Peshawar**

# Conference Board

| Organizing Committee | Editorial board |
|---|---|
| Dr. Yousaf Khalil | Dr. Sheeraz Ahmed |
| Dr. Amna Ali | Ms. Anum Hamid |
| Dr. Adil Adnan | Dr. Yousaf Khalil |
| Dr. Jehangir Durrani | Dr. Asif Nawaz |
| Dr. Alam Zeb Khattak | Dr. Sanaullah |
| Mr. Yasir Khursheed | Dr. Bakhsh Awan |
| Mr. Saad Suleman | Dr. Jehangir Khalil |
| Ms. Sosan Abbas | Dr. Mohsin Tahir |
| Mr. Iftikhar Alam | Dr. Fawad Ahmad |
| Mr. Mobeen Bangash | |
| Mr. Shahab Ali | |

# Keynote Speakers

## Prof. Dr. Muhammad Zahid

Dean Management Sciences,
Bahria Business Schools,
Bahria University Islamabad.

**PROFILE:**

Muhammad Zahid (Ph.D.) is a Professor and Dean of Management Sciences, at Bahria Business School, Bahria University, Pakistan. He obtained his Postdoctoral and Ph.D. in Sustainability and Financial Performance from Malaysia. He received his MS in Management and Master of Commerce degrees from Pakistan earlier. After completing a master's degree, he served the banking industry for 08 years as a branch and customer services manager. In 2014 he joined academia and published more than 100 articles and books related to sustainability practices. For his outstanding research work, he has been awarded "The Award for Excellence- 2016 Outstanding Journal Papers from Emerald Group Publishing" and the Best Paper Award (2014) in the International Symposium on Research in Innovation and Sustainability 2014 (ISoRIS' 14) 15-16 October 2014, Malacca, Malaysia. Moreover, he holds experience in editorship and is an invited reviewer of well-reputed journals in the fields of management, corporate sustainability, corporate governance and finance, gender in management, financial performance, sustainable development goals, and education for sustainable development. He has also supervised more than 30 research students and worked on several research grants in the aforementioned areas with the academic institutes of Malaysia, China, Saudi Arabia, and Pakistan. He also has expertise in working with regulatory bodies such as the Pakistan Stock Exchange (PSX) in designing sustainability guidelines and reports in the business and academic domains (Impact Ranking). He can be contacted at mianmz11@gmail.com

**KEYNOTE SPEECH:** Sustainability in Universities: From Teaching and Research to Societal Impact

Universities play a key role in shaping society, and today sustainability must be at the heart of their mission. This keynote explores how higher education can put sustainability into practice through curriculum, teaching, research, and community work. By integrating sustainability into all disciplines, universities can prepare graduates who are responsible, ethical, and ready to tackle global challenges. In teaching and research, sustainability should guide learning and

encourage innovation, teamwork, and solutions to issues like climate change, inequality, and resource use. Beyond academics, universities can build a culture of sustainability through student engagement, volunteer work, and community partnerships—turning knowledge into action. Assessment systems should also reflect this shift, measuring not just academic success but also contributions to social, economic, and environmental wellbeing. With this holistic approach, universities can become powerful drivers of sustainable development, inspiring students, faculty, and communities to work together for a fairer, greener, and more resilient future.

## Zafar Ahmed Siddiqui

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**PROFILE**

Dr. Zafar Ahmed Siddiqui is a distinguished Academician and Corporate Trainer currently serving as the Director at Office of Research Innovation and Commercialization (ORIC), at a leading Higher Education University. Where he is also overseeing the Business Incubation Center. He is actively engaged as a Mentor and Trainer of United Nation Development Project (UNDP) and National Business Development Program-Small & Medium Enterprises Development Authority (NBDP-SMEDA). Pakistan Engineering Council (PEC) has selected him Deputy Convener of its Innovation and Entrepreneurship Committee.

Over the past few years he has been invited across the country as Corporate Trainer and Expert, in ORIC Operations, Financial Sustainability & Growth and Business Incubation issues (Specially converting Final Year Projects into viable business) to National University of Science & Technology (NUST) Islamabad, Karakoram International University Gilgit, Azad Jammu & Kashmir University Muzaffarabad, University of Baluchistan Quetta, University of Peshawar, University of Punjab Lahore, University of Karachi, IMS Peshawar, Kohat University of Science & Technology, UVAS Lahore, NED University Karachi, Uo Poonch Rawalakot, BZU Multan, University of Loralai, BUITEMS Muslim Bagh, AWKU Mardan, UST Banu, Army College of Electrical & Mechanical Engineering Rawalpindi, Islamia University Bahawalpur, University of Layyah, SZABIST Larkana, Isra University Hyderabad, SBBU Nawabshah, IBA Sukkur, SALU Khairpur, MUET-SZAB Khairpur, MUET Jamshoro, UMS T.M. Khan, SAU Tandojam, University of Sindh Dadu, SBBU Noshero Feroz, GC University Hyderabad, SBKWU Quetta, Sarhad University Peshawar, UMT Lahore, Jinnah Women University Karachi, Arid Agriculture University Rawalpindi, CUVAS Bahawalpur, NUML Hyderabad and BUITEMS Quetta along with various Chambers of Commerce & Industries, Business Groups, Corporate & Service sectors, NGOs, Armed Forces and Police Academies all over the Pakistan.

Dr. Siddiqui is a frequent Keynote Speaker, Panelist & Member of different Statutory Bodies.

He has contributed as an Expert Reviewer of World Bank-Higher Education Commission (HEC) for Technology Transfer Support Fund (TTSF) & National Research Program (NRPU). He has also served in strategic role on various national and international projects, especially with Ball State University (USA) program and also author of several case studies.

In addition to his academic and consultancy work, Mr. Siddiqui brings rich industry experience. He previously served as General Manager at Fateh Group of Companies, Regional Sales Manager (South) at Dawlance Home Appliances. Along with all the gratified achievements of his life, he also relished the life in uniform for Pakistan Air Force (PAF) and now member of Central Executive Committee (CEC) of PAF-College of Aeronautical Engineering Professional Trust, (CAEPT). He has multiple discipline degrees, honored with gold medals and incentive tours to different countries. He is also experiencing the taste of Entrepreneurship.

**TITLE: THE IMPACT OF BEST PRACTICES IN BUSINESS ON SUSTAINABILITY AND GROWTH IN PAKISTAN**

Introduction: In the modern economic landscape, businesses that adopt best practices—such as transparency, innovation, employee engagement, ethical governance, and customer-centric models—experience higher levels of sustainability and growth. In Pakistan, where SMEs contribute over 40% to GDP and 80% of non-agricultural employment (SMEDA, 2024), there is a critical need to evaluate how implementation of business best practices affects long-term viability and performance.

Objective: This study investigates the role of best business practices in enhancing sustainability and growth across various sectors in Pakistan, focusing on measurable impacts in productivity, revenue generation, and environmental and social performance.

Methodology: A mixed-methods approach was applied. Quantitative data was collected from 150 registered SMEs across Punjab, Sindh, and KP through structured surveys. Financial performance, employee retention rates, and customer satisfaction levels were analyzed over a 2-year period. Qualitative interviews with 30 industry experts supplemented the analysis to contextualize the data.

Results: Firms implementing structured HR policies and ethical governance showed a 27% higher employee retention rate. Businesses focusing on innovation and digital transformation recorded a 19% annual growth in revenues. Enterprises that adopted environmental practices, like energy-efficient technologies, reported a 13% reduction in operational costs. Notably,

companies with corporate social responsibility (CSR) programs gained a 22% increase in customer loyalty and community trust.

Conclusion: The study confirms that best business practices positively influence both sustainability and growth in the Pakistani context. Ethical conduct, innovation, workforce development, and CSR are not only socially valuable but also economically strategic.

Recommendations:

Government and chambers of commerce should incentivize best practice adoption through tax relief and recognition. Establishment of best-practice training hubs for SMEs. Integration of sustainability modules into business education. Monitoring mechanisms to track best practice outcomes.

Keywords: Business Best Practices, Sustainability, Growth, SMEs, Pakistan Economy, Innovation, CSR, Employee Engagement, Ethical Governance, Business Strategy

## Dr. Muhammad Tahir Jan

**PROFILE**

Dr. Muhammad Tahir Jan is an accomplished academic, seasoned trainer, and global speaker with a PhD in Business Administration (Marketing). He earned his MBA following a Cum Laude graduation in his bachelor's degree, where he was also honored as the Best Student of the Year.

With nearly two decades of teaching and training experience, Dr. Jan has delivered a wide range of marketing-related courses and executive training sessions to learners across multiple levels from undergraduates to top-level professionals. He has trained executives from globally recognized organizations including Volkswagen, Nasdaq, Eventbrite, Box, and NetApp, and has delivered lectures and workshops across Pakistan, Afghanistan, Malaysia, South Africa, UAE, Australia, the USA, Turkey, and Qatar.

Dr. Jan is the founder of The Marketing School, an innovative online platform offering over 20 courses in marketing, communication, productivity, and business skills. Many of these courses are freely accessible and have attracted thousands of learners globally, including professionals from top-tier organizations.

His research expertise lies primarily in consumer behavior, sustainability marketing, and digital marketing, with over 65 publications in internationally indexed journals and presentations at more than 30 global conferences. His academic excellence has earned him prestigious recognitions such as the Best Researcher Awards and Best Indexed Journal Article Awards.

Dr. Jan's dynamic and engaging teaching style has made him a student favorite, consistently earning above 90% in teaching evaluations each semester. He is also a multiple-time recipient of the Best Teacher of the Year award.

Currently, he serves as an Associate Professor of Marketing at IIUM's Department of Business Administration. In this capacity, he leads key academic initiatives, mentors emerging scholars, and drives innovation in teaching, research, and training.

**TITLE: CIRCULAR ECONOMY MARKETING: STRATEGIES FOR A SUSTAINABLE FUTURE**

The traditional "take-make-dispose" economic model is no longer sustainable and is placing significant stress on the world's ecosystems and resources. The circular economy (CE) represents a new approach to resource utilisation, product longevity, and consumer purchasing behaviour, promoting more responsible consumption. People are increasingly discussing circular economy ideas in production and policy, but they haven't been widely applied in marketing yet.

Based on my research in various contexts, including Malaysia and Pakistan, which analyses the essential role of marketing in advancing circular economy initiatives and shaping consumer behaviour towards sustainability. The findings indicate that attitudes, social norms, and environmental factors significantly influence individuals' intentions to engage in circular purchasing, surpassing the impact of perceived ease or control. These observations underscore that sustainable circular economy initiatives must focus not only on systemic efficiency but also on altering consumer mindsets and incorporating sustainability into value propositions.

## Dr. Asif Nawaz

**PROFILE**

Dr. Asif Nawaz is an accomplished academic, researcher, and industry professional with over 18 years of experience across telecom, energy, and higher education. He holds a PhD in Electrical Engineering with specialization in Optical Networks, along with an MS in Computer Engineering, MBA in IT Management, and an Executive MBA.

He has served as a Consultant Enterprise Architect with Ericsson and as Senior Manager Wireless Networks at PTCL, where he led large-scale telecom and network transformation projects. Currently, he is an Assistant Professor in the Electrical Engineering Department at the Higher Colleges of Technology (UAE), where he has also served as Academic Program Chair and Division Chair.

His research and professional interests include Artificial Intelligence, IoT-enabled healthcare systems, Wireless Body Area Networks, and cognitive cities. He has led applied research projects on AI-driven wearable health monitoring systems, authored and reviewed papers for IEEE conferences, and actively builds industry–academia partnerships. Dr. Nawaz is passionate about advancing AI applications in Electrical Engineering to address real-world industrial and societal challenges.

**TITLE: APPLICATIONS OF AI IN ELECTRICAL ENGINEERING**

Artificial Intelligence (AI) is reshaping the landscape of Electrical Engineering by enabling smarter, faster, and more adaptive solutions across traditional and emerging domains. This talk will highlight the transformative applications of AI in areas such as power systems optimization, renewable energy integration, intelligent wireless communication, predictive maintenance of industrial systems, and advanced signal processing. Real-world examples will be discussed to illustrate how AI-driven methods—including machine learning, neural networks, and deep learning—are addressing challenges of efficiency, reliability, and scalability. Special emphasis will be placed on AI-enabled healthcare technologies, IoT-driven smart grids, and intelligent automation, showcasing how Electrical Engineers can leverage AI to design future-ready solutions. The session aims to provide insights into practical applications, ongoing research, and future opportunities where AI converges with Electrical Engineering to drive innovation and societal impact.

## Dr. Zahoor Ali Khan

Associate Professor
Academic Program Chair,
Higher Colleges of Technology, UAE

**PROFILE**

Dr. Zahoor Khan is a Senior IEEE member and a distinguished academic leader with over two decades of experience in research, teaching, and management across computing and engineering disciplines. He holds a PhD from Dalhousie University, Canada. Currently, he serves as Academic Program Chair and Associate Professor in the Faculty of Computer Information Science at the Higher Colleges of Technology, UAE.

Dr. Khan's multidisciplinary research spans wireless sensor networks, smart grids, and the Internet of Things, with over 50 ISI-indexed journal publications, 200+ peer-reviewed conference papers, and multiple book chapters. His work has been cited more than 11,000 times, with an h-index of 62 and i10-index of 214. He actively contributes to the scholarly community as an editor and board member of several international journals.

Recognized globally, Dr. Khan has been named among the top 2% most highly cited scientists by Stanford University (2019–2024) and has received numerous accolades, including Best Paper and Outstanding Service Awards at leading IEEE conferences.

**TITLE: CONVERGING SIGNALS — BASNS AT THE CROSSROADS OF IOT, AI, AND E-HEALTH**

This keynote explores the transformative potential of Body Area Sensor Networks (BASNs) as they intersect with Internet of Things (IoT) technologies, Artificial Intelligence (AI), and e-Health systems. It highlights how BASNs are evolving from isolated sensing platforms into intelligent, interconnected ecosystems that enable real-time health monitoring, predictive diagnostics, and personalized care. By converging these domains, the talk emphasizes the role of BASNs in shaping the future of digital healthcare—where data-driven insights, automation, and adaptive systems redefine patient outcomes and clinical workflows.

# Panelists

## Dr. Abid Naeem

**PROFILE**

Dr.Abid Naeem is serving as Sr. Manager GPON Planning at Pakistan Telecommunication Company Limited (PTCL) Peshawar. He got his Ph.D in FTTH Deployment and cost Optimization from INY Peshawar. He Got his MS in Management from IMS Peshawar. His research interests are Fiber optical Optimization, Customer Satisfaction, Wireless Communication, Free Space Optics, MW Transmission Planning and designing. He is a reviewer of scientific research journal and he has published over 7 research papers in scientific journals and in IEEE conferences related to FTTH Deployment and optimization, Customer Satisfaction He is the H.E.C Approved Supervisor.

## Mr. Muhammad Rashid Aman

Provincial chief Smeda khyber pakhtunkhwa

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Email: mrashid@smeda.org.pk

Academic Qualification: Master of Business Administration (MBA) – 1997 - 98

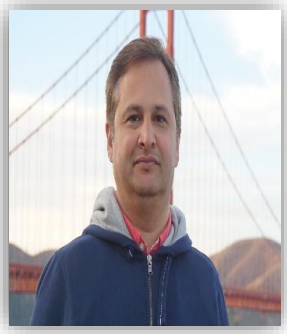
**PROFILE**

Mr. Muhammad Rashid Aman is a dynamic, accomplished and result oriented professional with over 24 years of progressive work experience. Mr. Rashid Aman is a business graduate with specialization in entrepreneurship ecosystem promotion and development. He has hands on experience in the fields of MSMEs development, private sector development, organizational management, project management, institutional development, policies and strategy formulation and implementation.

Mr. Rashid Aman has advanced understanding and capabilities in delivering technical and management support to public and private sector organizations across key economic cluster and sectors in Khyber Pakhtunkhwa. He is highly specialized in networking, coordination and liaison with key stakeholders including international donor agencies and business community.

As a provincial Chief Mr. Rashid Aman is leading SMEDA Khyber Pakhtunkhwa office & GB region for the last 07 years and has successfully managed SMEDA activities across the entire

regions. He has led number of high-profile projects including sector & cluster development projects, Public Sector Development Program (PSDP) and multimillion donor funded projects across Khyber Pakhtunkhwa.



## Dr. Zia Obaid

Associate Professor/ Director

Institute of Management Studies

University of Peshawar

**PROFILE**

Dr. Zia Obaid is a Fulbright Scholar and has earned a PhD in Public Administration and Public Policy from Florida State University. He earned an MPhil degree in Public Administration and Organization Theory from University of Bergen, Norway funded by the scholarship by the Norwegian government. His doctorate dissertation received the “Sweetie Cox Best Dissertation” award and Disasters and Community Research Fellowship (DCRF) for his dissertation. He earned the certification in Measurement and Statistics from Florida State University and that in Social Network Analysis from University of Kentucky, United States. He is an Associate Professor at the Institute of Management Studies, University of Peshawar and has been associated with the university for more than twenty years. His area of interest is development administration and policy implementation.

Dr.Obaid has widely published in national and international journals on topics related to public management, development administration, policy evaluation and implementation, social capital and organization theory. He has worked in various capacity building initiatives and was involved in programs designed to mitigate risk in vulnerable societies. His area of interest includes evaluation of foreign aid interventions and their impact on civil society with a focus on building soft skills of the populace through training and education.

Dr.Obaid has been involved as Project Director/Team Lead/Convener on various development sector projects partnered with UNDP, WFP, UNHCR, USEFP, GIZ, USAID, Swiss Aid, and Disaster Management Authorities in Pakistan and the US. He also delivered training in capacity building initiatives related to social mobilization and development sector management. As project convener he has been responsible for overall administrative and financial control and implementation of the project. His responsibilities included project conceptualization and operationalization; human resource selection and management; financial management and external coordination. Dr. Obaid has been trained in developing and evaluating tools that can

be employed in Monitoring and Evaluation of development sector initiatives across geographic, demographic and gender sensitive assessments. Dr. Obaid has been the invited speaker on many prestigious forums like PAF Junior Command and Staff School, Badaber, State Bank of Pakistan, and Pakistan Provincial Civil Services Academy, (PPSA), and is also the certified Lead Instructor of National Academy of Higher Education (NAHE). He has also served as Member of the National Course Review Committee of HEC for the subject of Public Administration and Policy.

## Dr. Awais Adnan

**PROFILE**

Dr. Awais Adnan is a Professor of Computer Science at the Institute of Management Sciences, Peshawar, with over 27 years of academic, research, and leadership experience. He holds a Ph.D. in Computer Science and specializes in Machine Learning, Computer Vision, and Multimedia Systems, with more than 74 peer-reviewed publications and supervision of more than 10 Ph.D. and MS research. He has enhanced his expertise through advanced certifications and professional training from globally recognized institutions, including the University of Queensland, Australia, Asian Institute of Technology (AIT), Thailand, the University of California, and University of Michigan. Beyond academia, Dr. Adnan has played a leading role in research commercialization, innovation, and entrepreneurial development. As Director of ORIC (2011–2024), he established strong academia–industry linkages, designed incubation and research management frameworks, and collaborated with government and international organizations to foster entrepreneurial ecosystems. He has also trained professionals and startups in project management, digital innovation, and IT entrepreneurship at national incubation centers and international forums. With his unique blend of academic depth, international exposure, and entrepreneurial engagement, Dr. Adnan continues to contribute to building bridges between higher education, industry, and innovation landscapes both nationally and internationally.

## Mr. Fazal Moqeem Khan

**PROFILE**

Cell: 0321-9042039 | Email: oriontraders@yahoo.com

Location: Peshawar, Pakistan

**Personal Statement**

A seasoned professional with over 30 years of experience in business management and leadership roles. Renowned for my dedication to fostering growth and welfare within the community, I possess strong interpersonal, leadership, and communication skills. As the Chairman of the All-Pakistan CNG Association (APCNGA) and an Executive Member of the Sarhad Chamber of Commerce & Industry Peshawar (SCCIP), I aim to contribute my expertise toward achieving business excellence and societal progress.

**Professional Experience**

**Chairman – All-Pakistan CNG Association, KP (APCNGA)**

**Tenure: September 2011 – Present**

- Successfully managing the affairs of 500+ CNG stations in Khyber Pakhtunkhwa.
- Spearheaded conflict resolution initiatives and price determination strategies for the CNG sector.
- Advocated for the sector's interests on provincial and national platforms.
- Ensured transparency through annual audits and fair elections, being re-elected as Chairman consistently.

**Executive Member – Sarhad Chamber of Commerce & Industry Peshawar (SCCIP)**

**Tenure: September 2020 – September 2022**

- Played a key role in high-level decision-making and policy formulation.
- Represented and managed cross-sectoral business affairs within Peshawar.
- Built strong networks with business sectors across Khyber Pakhtunkhwa.

**Chief Executive Officer – Orion Group of Businesses**

**Tenure: 1995 – Present**

**Education**

- Bachelor of Commerce – Commerce College Peshawar, University of Peshawar (1990–1992)
- Diploma in Commerce – Government College of Commerce Peshawar (1985–1986)
- Certificate in Commerce – Government College of Commerce Peshawar (1983–1984)

**Skills and Competencies**

- Leadership and Teamwork
- Strategic Planning and Critical Thinking
- Conflict Resolution and Decision-Making
- Business Development and Project Implementation
- Strong Communication and Presentation Skills.

## Dr. Qasim Mansoor

**PROFILE**

**Manager University-Industry Linkages, Islamia College Peshawar**

Dr. Qasim Mansoor Jalali is serving as Liaison Manager, University Industry Linkages at ORIC, Islamia College Peshawar since 2018. He has previously served at PTCL for 16 years. He is an Electrical Engineer having done MBA and went on to earn a PhD in HR.

He has served as Director ORIC, Additional Registrar and Registrar at Islamia College Peshawar.

At Islamia College Peshawar, he gas been instrumental in establishing links with many leading universities. Dr. Qasim is passionate about Linkages and networking and has helped many universities in the province establish ORIC and helped them design policies.

# Conference Agenda (1st Day-18th Sep, 2025)

| Time | Activity |
|---|---|
| **9:30-11:00 AM** | Registration |
| **11:00 AM** | Conference to begin with Recitation of Holy Quran, followed by National Anthem |
| **11:15 AM** | The **Vice Chancellor** will deliver the welcome address, |
| **11:30 AM** | Conference Chair will deliver the speech |
| **11:45 AM** | Keynote presentation by **Dr. Zahid** |
| **12:00-12:15** | Keynote presentation by **Dr. Tahir Jan** |
| **12:15 PM** | Speech by **Dr. Shafqat Ayaz** |
| **12:30 PM** | Chief Guest **Meena Khan Afridi** will address the audience. |
| **1:00 – 1:30** | Shield distribution ceremony will be held to honor the guest. |
| **1:30 – 2:30 PM** | Guests will be invited for formal Lunch with the Honorable **Chancellor** (Conference Room) |
| **2:30 – 4:00 PM** | Panel Discussion, moderated by **Miss Anum Hamid**<br>*Theme: "Synergy and Innovation: Understanding and Bridging the Gaps between Academia and Industry"*<br>The session will conclude at 4:00 |
| **4:00 – 5:00 PM** | PhD Symposium will run from 4-5pm<br>Mr. Yasir Rasheed (Comp Sci)<br>Mr Majid Khan (Comp Sci) |
| **5:00 – 5:30 PM** | Tea break |
| **5:30 – 7:30 PM** | Musical Event |
| **8:00 PM** | The day will conclude with dinner |

# Conference Agenda (2nd Day-19th Sep 2025)

**Session No: 01**
**Venue: Computer Lab 103**
**Time: 9:00-10:30**

| S. No | Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|---|
| **Track: Computer Science** | | | |
| | **A Robust Deep Learning Model for Early Glaucoma Detection Using Retinal Imaging** | Waqas Ahmad, Aqib Mehmmod, Hamail Raza Zaid, Salman Ali Khan, Muhammad Adil, Mubashir Zainoor, AtifIshtiaq & Zain Shaukat | Session Chair<br>Dr. Atif Ishtiaq<br><br>Session Co-Chair<br>Mr. Irfan Ullah |
| | **ABCNN: A Hybrid Artificial Bee Colony Neural Network for Robust Classification** | Maria Ali, Muhammad Danyal, Tayyaba Riaz, Dr. Latif Ullah, Dr. Sami Ullah | |
| | **Adaptive and Scalable Thread Pooling for Innovative Distributed Systems** | Mohammad Abrar Khan, Muhammad Irfan Uddin & Sana Ullah Khan | |
| | **Advanced Deep Learning-Based Potato Defect Identification Leveraging YOLOv8 for Smart Agriculture** | Waqas Ahmad, Atif Ishtiaq, Daud Khan, Mohsin Tahir & Latif Jan | |
| | **Skin Cancer Classification Using DenseNet121 Convolution Neural Network Model** | Muhammad Danish Ali, Soo Kyun Kim & Muhammad Ali Iqbal | |
| | **ACONN: A Metaheuristic-Driven Neural Network for Better Classification** | Maria Ali, Muhammad Danyal, Dr. Latif Ullah, Dr. Sami Ullah, Tayyaba Riaz | |
| | **Android Malware Detection Through Machine Learning Models: A Comparative Study** | Muhammad Arshad, Umar Daraz, Muhammad Shakeel, Muahhamd Waqas Rasool, Ayyaz Huassain & Abdul Wahab Waseem | |

**Session No: 02**

**Venue: Computer Lab 104**
**Time: 9:00-10:30**

| Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|
| **Track Computer Science** | | |
| **An Intelligent Energy Harvesting Framework for Enhancing Sensor Longevity in Wireless Body Area Networks (WBANs)** | Sadaf, Gulzar Mehmood & Ajab Khan | **Session Chair** Dr. Lateef Jan<br>**Session Co-Chair** Mr. Ayub Khan |
| **Automated Detection, Measurement, and Classification of Coronary Artery Plaque Using AI Transformer** | Majid Khan, Sheeraz Ahmad & Ghassan Hasnain | |
| **Exploration of Deep Learning Based Recognition for Urdu Text** | Sumaiya Fazal & Sheeraz Ahmad | |
| **Impact of AI in Recrafting the Education System of Pakistan** | Taleia Haroon | |
| **Track: Engineering** | | |
| **Synthesis and Characterization of Tubular Hydrophobic Geopolymeric Membranes from Metakaoline for Water Desalination** | Atif Nawaz & Saeed Gul | |
| **Energy Harvesting Implementation in WBAN Routing Protocols with Multi-relay Co-operation** | Yasir Ali Rasheed, Sheeraz Ahmed & Aatif Ishtiaq | |
| **Track: Allied Health Sciences** | | |
| **Rewriting Trauma in Conrad's Heart of Darkness and Naipaul's A Bend in the River** | Shahid Iqbal | |

**Session No: 03**
**Venue: Computer Lab 105**
**Time: 9:00-10:30**

| Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|
| **Design Evolution and Feature Enhancement Strategies for Advanced Digital Stethoscopes** | Madeeha Akbar, Sayed Shahid Hussai & Shahzad Anwar | **Session Chair** Dr. Khuram<br>**Session Co-Chair** Dr. Amin Ullah |
| **Exploring the Role of UpToDate APP in Allied Health Sciences** | Muhammad Haseeb | |
| **Modern Medical Imaging: Foundations, Techniques, and Future Directions** | Fatima Abbas & Sehrish Munir | |
| **Advances in Ultrasound Technology: From Medical Imaging to Industrial Applications - A Comprehensive Review** | Fatima Abbas | |
| **Impact of Empty Nest Syndrome on Parental Mental Health: Moderating Role of Coping Styles** | Ms. Haifa Zafar | |
| **Liposomal Nano delivery targeting CXCR4 for the Effective Treatment of Peritoneal Fibrosis** | Hasnat Muhammad, Khan Asifullah, Raza Faisal & Minjie Sun | |
| **Impact of anticipatory grief on quality of life among care givers of thalassemia patients "Mediating role of physical activity"** | Hifza Fatima, Sadaf Ahsan | |
| **Tea Break 10:30-11:00** | | |

**Session No: 04**
**Venue: Computer Lab 103**
**Time: 11:00-12:30**

| Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|
| **Vaccination Coverage and Challenges in Polio Eradication: A Field Study in Khyber Pakhtunkhwa** | Asma, Anbareen and Muhammad Saeed | **Session Chair** Dr. Adil Adnan<br><br>**Session Co-Chair** Dr. Mudassar Abdullah |
| **Synthesis and characterization of Deep Eutectic Solvent for Separation Techniques** | Kamran Akbar, Saeed Gul & Mansoor Ul Hassan | |
| Track: Media Studies | | |
| **Evaluating Social Media Credibility & Its Influence on Political Discourse in Pakistan** | Shabir Ullah Khan Amjid Khan & Muhammad Saeed | |
| **Love, Marriage, and the Media: Examining the Influence of Pakistani Dramas on Pakhtun Youth's Perceptions of Romantic Relationships** | Amjid Khan, Muhammad Saeed & Noman | |
| **Public Relations Perspective: Exploring the Impact of Internal Public on Image of Public and Private Hospitals in Peshawar** | Asif Ali, Muhammad Saeed & Amjid Khan | |
| **Concentration of Homogeneity in Content And Limitation Of Audience Choice Due To Media Cross Ownership: Case Study of Jang Group** | Fahad Husain, Muhammad Saeed & Amjid Khan | |
| **Analyzing the Effectiveness of Community Radio in Building Trust and Encouraging Polio Vaccination in District Bajaur** | Saad Shafiq, Muhammad Saeed & Amjid Khan | |

**Session No: 05**
**Venue: Computer Lab 104**
**Time: 11:00-12:30**

| Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|
| **Coverage of Climate Change in Pakistani Media** | Mahrukh Mushtaq, Anum Hamid & Dr. Bakht Zaman | |
| **Representation of Minorities in Pakistani Television: Perceptions of the Christian Community in Islamabad on Lahore Church Blast Coverage** | Muhammad Saeed, Zafar Iqbal & Shahab Ali | |
| **Selling Gender: A Critical Discourse Analysis of Gender Roles in Pakistani TV Advertisements** | Qurrat-ul-Ain Farooqi | |
| **Social Media Growth Fuels Gen Z Shift to Engagement Over Accuracy** | Muhammad Aqib, Anum Hamid & Dr. Sheeraz Ahmad | Session Chair Dr. Amna Ali |
| **Behind the Likes: The Cultural and Environmental Cost of Instagram Fashion** | Affra Durani, Shahab Ali & Dr.Bakht Zaman | Session Co-Chair Dr. Rizwana |
| Track: Management Sciences | | |
| **Data Mining for Smarter Administration of TVET Institutes** | Yasir Ali Rasheed, Aashir Sheeraz & Sheeraz Ahmed | |
| **Halal Food Purchase Intention Among Malaysian Consumers: A Conceptual Study** | Muhammad Tahir Jan, Dzuljastri Abdul Razak & Syed Ahmad Ali | |

**Session No: 06**
**Venue: Computer Lab 105**
**Time: 11:00-12:30**

| Title of the Manuscript | Author(s) | Session Chair & Co-Chair |
|---|---|---|
| **Influencer Marketing in Peshawar's Food Industry: Perspectives of Food Influencers and Restaurant Owners** | Faria Shah Amjid Khan & Muhammad Saeed | Session Chair Dr. Sahibzada Aurangzib<br>Session Co-Chair Dr. Naveed Azeem |
| **Track: Mathematics** | | |
| **Generalized Variational Joint Image Segmentation and Registration Model** | Laiba Iftikhar, Haider Ali & Lavdie Rada | |
| **Predictive Modelling of Crop Yields Through Data Mining Approaches** | Zain Shaukat, Aqib Mehmood, Waqas Ahmand, Hooria khan, Mubashir Zainoor & Salman Ali khan | |
| **Track: English** | | |
| **Race and identity: An Analysis of Lacanian lack approaches to Burnt Shadows** | Fazal Ghufran, Dr. Zia Ullah, Anayat Ullah & Qurratul Ain Farooqi | |
| **The Effect of YouTube Videos on Vocabulary Learning in Non-Native English Speakers: A Case Study of Undergraduate Students** | Haya Fatima Nawaz, Amjid Khan & Muhammad Saeed | |
| **Optimized Learning Platform for Connectivity Limited Educational Environments** | Neha Khurram, Fazal Malik, Salman Ali Khan & Muhammad Qasim Khan | |
| **Supervised Single-Channel Speech Enhancement Using U-Net-Bilstm** | Ahmed Usman, Talha Ali & Najvia | |
| **Impact of anticipatory grief on quality of life among care givers of thalassemia patients "Moderating role of family support"** | Hifza Fatima, sadaf Ahsan | |

# Titles, Authors and Abstract of Conference Papers

## Paper Title 1: A Robust Deep Learning Model for Early Glaucoma Detection Using Retinal Imaging.

Authors: Waqas Ahmad, Aqib Mehmmod, Hamail Raza Zaidi, Salman Ali Khan, Muhammad Adil, Mubashir Zainoor, AtifIshtiaq, Zain Shaukat

Abstract: The Glaucoma Detection System is designed for early glaucoma detection, combining advanced technology with compassionate healthcare. It employs a Convolutional Neural Network (CNN) model within a userfriendly Tkinter application, focusing on medical image analysis. The system aims to democratize access to eye care, addressing the silent progression of glaucoma, and emphasizes the importance of an accurate CNN model for early detection. Key features include automated capabilities and real-time image processing to expedite detection, allowing healthcare professionals to priorities urgent cases. The thesis proposes further development through multimodal data integration and feedback mechanisms to enhance effectiveness and promote proactive eye health, reinforcing principles of equitable access to care.

## Paper Title 2: ABCNN: A Hybrid Artificial Bee Colony Neural Network for Robust Classification

Authors: Maria Ali, Muhammad Danyal, Tayyaba Riaz, Dr. Latif Ullah, Dr. Sami Ullah

Abstract: Artificial Neural Networks (ANNs) are broadly applied for solving classification challenges because of their ability to learn complex nonlinear mappings. However, conventional training methods such as Back-Propagation Neural Networks (BPNN) often suffer from slow convergence and local minima issues. Gradient-based techniques like Levenberg–Marquardt (LM) improve speed but remain sensitive to initial weights. To overcome these limitations, bio-inspired metaheuristic optimization methods have become a key focus of recent research. Through this work, we introduce a unified model named Artificial Bee Colony Neural Network (ABCNN), which integrates the global search ability of the Artificial Bee Colony (ABC) algorithm with the learning capacity of neural networks. The ABC algorithm, inspired by the foraging behavior of honeybees, explores weight spaces through employed, onlooker, and scout bee phases, providing strong balance among global search and local refinement. We assessed

ABCNN on two benchmark classification datasets, and the findings show that it delivers higher accuracy, lower Mean Squared Error (MSE), and more stable convergence than BPNN, LM, and Elman Recurrent Network (ERN).

## Paper Title 3: Nano-enabled ctDNA pioneering early detection and treatment of breast cancer

Authors: Abida Bibi, Junaid Qayum, Ishtiaq Ahmad khan, Muhammad Irfan.

Abstract: Breast cancer is a significant global health issue, accounting for about 15% mortality rate in women. Based on molecular classification, breast cancer is classified into four distinct subtypes based on hormone receptor status (ER, PR), and HER2 protein. Traditional imaging techniques, including mammography, ultrasound, MRI, and PET, offer varying levels of sensitivity and specificity, yet each has limitations in detecting small tumors or comprehensively assessing treatment response.

Liquid biopsy, which use circulating tumor DNA (ctDNA), has emerges as a promising non-invasive technique for early tumor detection, real-time monitoring of tumor dynamics, identifying resistance mechanisms, treatment response and detecting disease recurrence. Recent advancements in ctDNA analysis techniques, including droplet digital PCR (ddPCR) and BEAMing, have improved sensitivity and accuracy. Next-generation sequencing (NGS) based ctDNA assays further enhance detection capabilities, treatment response monitoring assays and tumor recurrence. Despite these advancements, challenges such as false positives from clonal hematopoiesis persist. The use of nanoparticles, which have high sensitivity and specificity due to tailored probes targeting mutations or genetic markers specific to breast cancer cells, offers significant improvements in diagnostic accuracy by reducing false positives.

Liquid biopsy represents a transformative approach in breast cancer management, offering a non-invasive, highly sensitive, and specific method for early detection and monitoring of the disease. Although challenges remain, particularly with false positives, the continuous advancements in ctDNA analysis and nanoparticle technology hold promise for improving diagnostic accuracy and patient outcomes.

## Paper Title 4: Adaptive and Scalable Thread Pooling for Innovative Distributed Systems

Authors: Mohammad Abrar Khan, Muhammad Irfan Uddin, Sana Ullah Khan.

Abstract: This work contributes to shaping the future of distributed computing systems through innovative auto-scaling approaches, aiming for excellence in performance and in resource management. Optimizing Thread Pool Systems (TPS) in distributed environments is a challenging issue, particularly when dealing with dynamic workloads. The existing Collaborative Round Robin Distributed Thread Pool System (CRR-DTPS) improves load distribution and backend tuning but lacks auto-scaling capabilities—leading to dropped requests once maximum capacity is reached out. To overcome this, we propose the Capacity-Based Scalled DTPS (CBS-DTPS), an enhanced model that monitors system load and dynamically scales TPS instances up or down when needed. This approach ensures better resource utilization, increased availability, and improved responsiveness under varying workloads. Experimental results from a custom client-server testbed demonstrate that CBS-DTPS outperforms CRR-DTPS in throughput, scalability, and efficiency. This work reflects a step towards building more responsive and efficient distributed systems, supporting the conference's vision of shaping the future through innovation, excellence, and leadership.

## Paper Title 5: Advanced Deep Learning-Based Potato Defect Identification Leveraging YOLOv8 for Smart Agriculture

Authors: Waqas Ahmad, Atif Ishtiaq, Daud Khan, Mohsin Tahir, Latif Jan

Abstract: Embedded processing has recently advanced, enabling a variety of computer vision tasks, including activity and action recognition, object detection, and tracking. One crucial application of these advancements is in agricultural technology, specifically in the detection and monitoring of crops such as Potatoes. The accurate and timely detection of Potatoes is crucial for optimizing harvests, minimizing waste, and ensuring the delivery of high-quality produce to consumers. In this groundbreaking research, we developed an advanced framework based on the YOLOv8 model, specifically tailored for Potato detection in both controlled and unpredictable agricultural environments. Unlike traditional detection methods that primarily depend on low-level features and statistical learning techniques, our innovative approach harnesses the power of Convolutional Neural Networks (CNNs), dramatically enhancing detection accuracy.

## Paper Title 6: Vaccination Coverage and Challenges in Polio Eradication: A Field Study in Khyber Pakhtunkhwa

Authors: Asma, Anbareen, Muhammad Saeed

Abstract: Poliomyelitis remains a major public health challenge in Pakistan despite decades of eradication efforts. This study assessed oral polio vaccine (OPV) coverage and identified barriers to immunization in two high-risk districts of Khyber Pakhtunkhwa, Mardan and Swabi. Data were collected through structured questionnaires at randomly selected Expanded Program on Immunization (EPI) centers and households, covering 321,044 individuals in Mardan and 54,528 in Swabi. In Mardan, OPV coverage was 17.6% among children aged 0–6 months and 77.6% among those aged 6–59 months, with 1.6% missed. In Swabi, corresponding rates were 18.25%, 79%, and 2.2%. A household survey of 300 families showed that most parents had education only up to the primary level, and the main reason for non-vaccination was lack of awareness, followed by misconceptions and security concerns. Immunization staff identified low parental awareness, misinformation, and safety risks as the most frequent barriers. Suggested improvements included stronger community awareness campaigns, better security for workers, adequate staffing, and improved transport. Public opinion indicated that younger age groups (20 years) were more supportive of vaccination campaigns compared to older groups. The findings conclude that eradication of poliomyelitis requires complete OPV coverage, targeted awareness programs, and multisectoral support involving health authorities, communities, and media.

## Paper Title 7: Synthesis and Characterization of Tubular Hydrophobic Geopolymeric Membranes from Metakaoline for Water Desalination

Authors: Atif Nawaz, Saeed Gul

Abstract: Desalination is one of the most effective techniques in water treatment in which salt and are removed from saline water while using less polluting and utilize comparatively constant resources. Nevertheless, traditional desalination technologies, especially, reverse osmosis (RO) and thermal evaporation are energy consuming requiring huge up-front cost. The main objective of this study was to synthesize a tubular hydrophobic geopolymer membrane through extrusion for water desalination. A dough type paste was formed by mixing raw materials with alkali activator solution of sodium hydroxide. Extruder with tube die was used to get product in the form of tubular membrane which was initially hydrophilic. The membrane thus extruded were cured at 70 C and dip-coated with MTCS coating method to render the membrane surface hydrophobic with contact angle 147.7o to serve as a water desalination application in direct contact membrane distillation. The porosity value of 32.15% and the equally encouraging tortuosity factor of 1.867 on the synthesized membranes have ensured. The mean pore size is 0.114 um that is suitable

in membrane distillation during desalination of water via DCMD. The geopolymer membrane has been synthesized at low temperature (70 °C) as compared to ceramic membrane which requires high temperature sintering (1000-1500 °C).

## Paper Title 8: Behind the Likes: The Cultural and Environmental Cost of Instagram Fashion

Authors: Affra Durani, Shahab Ali, Bakht Zaman

Abstract: This paper explores the cultural and environmental consequences of Instagram-driven fashion trends in Pakistan, focusing on how Instagram stories shapes consumer behaviour, cultural identity, and sustainability practices. Drawing on the documentary “Behind the Likes: The Cultural and Environmental Cost of Instagram Fashion”. The study examines the impact of digital fashion trends in Peshawar through interviews with boutique owners, fashion students, and social media influencers. Findings reveal that Instagram accelerates fast fashion by promoting Western fashion, promoting consumerism, and neglecting local traditions. This study is not only contributing to cultural integration but also strengthens environmental challenges such as waste, overproduction, and unsustainable practices. The study highlights the dual role of Instagram as both a cultural integration and commercial driven, raising important questions about globalization, digital media, and environmental responsibility. The paper calls for greater attention to sustainable fashion alternatives that preserve cultural identity while addressing the environmental costs of fast fashion.

## Paper Title 9: Coverage of Climate Change in Pakistani Media

Authors: Mahrukh Mushtaq, Anum Hamid, Bakht Zaman

Abstract: As an institution media has a vital role of informing the public and creating awareness concerning different issues such as climate change. Pakistani media, especially newspapers and talk shows inadequately address the issue. The study explores the representation of climate change in Pakistani media, focusing on its coverage in prime time talk shows on three leading news channels: Geo News, ARY News and Bol News. The study concludes that there is a constant leakage of climate change issues and they are outcompeted by other topics that are reported intermittently and briefly. This research is qualitative in nature; thus, the study involves the use of thematic analysis in an effort to examine the content of prime time talk shows broadcasted by Geo news, ARY news, and Bol news for a three months period in June, July, and August, 2023. Being a qualitative analysis, data collection in this study entailed observing

and documenting the patterns, frequently addressed issues, and discourses that characterized the selected talk shows concerning climate change. The research reveals the contemporary tendencies of climate change reporting in media of Pakistan, PR's influence on climate discourses, and their consequences for perception and policy. This will be useful to media practitioners, public relations theorists and, policy makers in an effort to understand the future prospects of optimism or pessimism in advertising in the face of climate change communication.

## Paper Title 10: Skin Cancer Classification Using DenseNet121 Convolution Neural Network Model

Authors: Muhammad Danish Ali, Soo Kyun Kim, Muhammad Ali Iqbal

Abstract: Identification of Skin cancer is a challenging task due to visual similarities among different skin types. However, its early detection is crucial in reducing mortality rates. Factors like texture, colour, and boundary irregularities make precise identification difficult. This article introduces a novel technique using channel attention mechanism to emphasize critical information to reduce noise and enhance model sensitivitywhile minimizing overfitting utilizing a DenseNet121 based convolution neural networks (CNNs). The proposed technique achieves an optimal classification performance accuracy of 90% on the HAM10000 dataset, outperforming alternative methods. Overall, the channel attention mechanism model offers a reliable approach for skin cancer identification, with promising results indicating its effectiveness in addressing the challenges of visual similarity in diagnosis.

## Paper Title 11: Data Mining for Smarter Administration of TVET Institutes

Authors: Yasir Ali Rasheed, Aashir Sheeraz, Sheeraz Ahmed

Abstract: Retaining the trainees is a major problem for the TVET institutes today. The trend of TVET educational in Khyber PakhtunKhwa province has improved in recent decades. Despite its high cultural barriers, resistance in women education and dropout rates still on the basis of annual admission, Khyber PakhtunKhwa holds 2nd position among all other provinces of Pakistan. In this research we have tried to decrease the dropout ratio by enhancing the Daily attendance of the trainees and improving their results. Monthly Fee slip, Date Sheet and Results will be shared with the parents/guardians through SMS/WhatsApp. New TVET institutes administration will be able to check the trainee educational record of the previous TVET institute. The Data Mining for Smarter Administration of TVET Institutes will be a Mobile and Web-Based

Application and will keep close relationship between Parents, Teachers and Administration of the TVET institute.

## Paper Title 12: Design Evolution and Feature Enhancement Strategies for Advanced Digital Stethoscopes

Authors: Madeeha Akbar, Sayed Shahid Hussain, Shahzad Anwar

Abstract: A stethoscope is a fundamental auscultation and diagnostic device that plays a major role in medication and assists in the identification of sounds inside the body to predict cardiovascular and respiratory diseases. The advent of electronic and artificial intelligence (AI)-enhanced digital stethoscopes is prompted by the limitations of traditional auscultation performance, such as the need for a clinician's experience, failure to detect the required sounds in noisy conditions, and the inability to store patient data. This study focuses on the evolution in the design, relative performance characteristics and areas of future improvement of stethoscopes, including digital devices commissioning AI. Studies highlight the employment of advanced filters to acquire important auscultating frequency bands, a high-gain amplifier to boost low-frequency internal body sounds, a noise cancellation circuit to block out background noise,

Bluetooth for data sharing in real-time signal processing, and syncing with other medical devices. Key features that could be introduced in future versions are adaptive frequency filters, AIbased clustering to classify the sound, remote diagnostic functionality, and an improved data storage system. Protection circuits that take the form of lithium-ion batteries, wireless modules and processing based on microcontroller are some of the resource components highlighted in terms of portability and efficiency. This research seeks to develop stethoscopes by incorporating innovations while managing limitations, ultimately enhancing tools for healthcare professionals.

## Paper Title 13: Entangled Flesh: Bio-Semiotic Resonance and Quantum Shadows in Postcolonial Fiction Rewriting Trauma in Conrad’s Heart of Darknessand Naipaul’s A Bend in the River

Authors: Shahid Iqbal

Abstract: This article proposes a bio-semiotic quantum framework for reading colonial and post-colonial trauma in Joseph Conrad’s Heart of Darkness and V. S. Naipaul’s A Bend in the River. Moving beyond the trope of the “silenced body,” the study reconceptualizes trauma as an entangled field of odours, sounds, colours, and affective intensities that migrate across bodies,

texts, and spacetimes. Through close textual analysis, archival chemistry, and sensory phenomenology, this article demonstrates how raw-latex vapour, diesel fumes, river-mist, and radio static operate as non-linguistic carriers of imperial violence. Conrad's slow, adhesive prose reactivates the olfactory and acoustic residues of the Congo Free State, while Naipaul's stuttering syntax and petro-modern soundscape enact the temporal disjunctions of post-independence Zaire. Each novel is read as a living semiospheric membrane that stores traumatic data and transmits it to the reader's senses, obliging us to acknowledge that colonial pain is not past but perpetually arriving. The essay concludes by outlining an ethical practice of "slow, porous reading" that keeps sensory memory alive and resists the consolations of closure.

## Paper Title 14: Energy Harvesting Implementation in WBAN Routing Protocols with Multi-relay Co-operation

Authors: Yasir Ali Rasheed, Sheeraz Ahmed, Aatif Ishtiaq

Abstract: Mostly simulations are used to evaluate the performance of Wireless Body Area Networks (WBANs). The recent researches are focused on channel modelling and energy conservation at Network/MAC layer. Normally collaborative learning, path loss and energy harvesting are ignored in these schemes of studies. In this research, we will try to use some Energy Harvesting(EH) mechanism to recharge the batteries instead of replacing the time and again. In contrast with the existing studies, the proposed scheme considers the collaborative learning and energy harvesting. Cost functions are used to identify the most feasible wireless route from a given node to sink while sharing each other's distance and residual energy information. The human body temperature (thermal energy) and pumping of heart can be used for energy harvesting within the body while solar energy can be used for energy harvesting of nodes on the human body.

## Paper Title 15: Exploring the Role of UpToDate APP in Allied Health Sciences

Authors: Muhammad Haseeb

Abstract: This paper explores the critical role of the UpToDate mobile application in enhancing clinical decision-making within Allied Health Sciences. As a comprehensive, evidence-based resource, UpToDate supports healthcare professionals—including physician assistants, physical therapists, and occupational therapists—by providing rapid, point-of-care access to multidisciplinary medical information. Key features such as offline accessibility, voice search,

EHR integration, and personalized content recommendations facilitate effective communication, coordination, and collaboration across healthcare teams. The app's utility spans diverse settings, including telemedicine, emergency care, and education, particularly benefiting areas with limited internet connectivity. Hypothetical case studies demonstrate its positive impact on treatment planning, diagnostic accuracy, and patient outcomes. Ultimately, this paper underscores UpToDate as an indispensable tool for improving healthcare efficiency and quality through informed, real-time decision-making.

## Paper Title 16: Modern Medical Imaging: Foundations, Techniques, and Future Directions

Authors: Fatima Abbas, Sehrish Munir.

Abstract: Modern medical imaging plays a pivotal and critical role in diagnosis, treatment planning, and patient monitoring. Medical Imaging is combination of clinical medicine, physics, and computational science. This study and review offers a comprehensive examination of the foundational principles, widely adopted imaging modalities, and emerging innovations that are shaping the future of medical imaging. Core technologies such as X-ray, computed tomography (CT), magnetic resonance imaging (MRI), ultrasound, and nuclear imaging (PET/SPECT) are discussed with a focus on their underlying physics and operational mechanisms. The study also highlights recent advancements, including real-time imaging, the development of novel contrast agents, hybrid imaging systems, and the integration of artificial intelligence (AI) and machine learning for automated image analysis, reconstruction, and clinical decision support. In this study pressing challenges such as data privacy, standardization, AI model interpretability, and the need for robust regulatory frameworks are also discussed. By combining current knowledge and technological trends, this review aims to guide researchers, clinicians, and industry stakeholders in understanding the evolving landscape and future directions of modern medical imaging.

## Paper Title 17: Advances in Ultrasound Technology: From Medical Imaging to Industrial Applications – A Comprehensive Review

Authors: Fatima Abbas

Abstract: Ultrasound technology has undergone a significant transformation from 2020 to 2025, driven by a convergence of advanced signal processing, miniaturization, and artificial intelligence

(AI). This review synthesizes key innovations across medical, industrial, and therapeutic domains. We analyze peer- reviewed literature to highlight major breakthroughs, including the emergence of AI-enhanced imaging algorithms that have dramatically improved image quality by 25-40%, and the advent of real-time 3D/4D imaging. These advancements have led to a 30% reduction in diagnostic time. Furthermore, the review explores the evolution of portable ultrasound systems, which are making point-of-care diagnostics more accessible, and the rise of therapeutic applications like High-Intensity Focused Ultrasound (HIFU) and role of AI in revolutionizing ultrasound imaging. The findings position ultrasound not just as a diagnostic tool, but as a versatile, multidisciplinary instrument poised for continued growth.

## Paper Title 18: Synthesis and characterization of Deep Eutectic Solvent for Separation Techniques

Authors: Kamran Akbar, Saeed Gu, Mansoor Ul Hassan

Abstract: The solvent synthesized in the current work are greener and non-toxic solvent namely Deep Eutectic Solvent as alternate of hazardous Ionic and Organic solvent and their application with experiment discussed in detail. First, the production of DES based SLM and their current state of progress are reviewed in this paper. It then offers an overview of various approaches that employ DES as a special adjustable platform to create sophisticated SLM in order to separate liquid and gasses as documented inside the written work. The next phase provides a detailed description of the SLM membranes' liquid and gas division capabilities. Before the problems, the impact of process factors on DES based SLM is also emphasized. Finally, difficulties and prospects for further research are noted. In this researches producing supported liquid membrane based (SLM) Deep Eutectic Solvent (DES) is used because of their advantages such as high resistance to transport good performance easiest scale-up, economically low cost, and easy operation. The fabrication, of DES based SLM, is challenge and high dependent on the parameters of fabrication, the properties, of DES, and properties of membrane. The method used in for fabrication is immersion pressure-based, method of DES based SLM, gases, separation. However, the DES durability and process variables temperature pressure and feed content determine the SLM durability. The approach to greener solvent synthetization advancement and production of DES based SLM. It then goes over various methods for designing sophisticated SLM for gas separation using DES as a configurable platform that have been documented.

## Paper Title 19: Android Malware Detection through Machine Learning Models: A Comparative Study

Authors: Muhammad Arshad, Muahhamd Waqas Rasool, Umar Daraz, Ayyaz Hussain, Muhammad Shakeel, Abdul Wahab Waseem

Abstract: Android's extensive use makes it a major target for malware, posing noteworthy universal security threats. To combat this, machine learning (ML) offers influential detection solutions. This study leveraged the KNIME Analytics Platform to implement seven key ML classifiers for detecting malicious Android applications. The classifiers used were: Naïve Bayes, Support Vector Machine, Decision Tree, Logistic Regression, Random Forest, Gradient Boosting, and K-Nearest Neighbors. Our methodology involved evaluating these models on two well-known benchmark datasets: MALGENOME and DREBIN. The MALGENOME dataset, consisting of 3,799 applications (1,260 of which were malicious), and the DREBIN dataset, with 5,560 applications from 179 distinct families, were used to test the models' effectiveness. The results were extraordinary, with the models achieving extraordinary accuracies of 99.96% and 99.67% on the MALGENOME and DREBIN datasets, respectively. These results highlight the vigorous competence of ML-based approaches to effectively and accurately detect and alleviate the threat of Android malware.

## Paper Title 20: Halal Food Purchase Intention among Malaysian Consumers: A Conceptual Study

Authors: Muhammad Tahir Jan, Dzuljastri Abdul Razak, Syed Ahmad Ali

Abstract: Halal food consumption is not only a religious requirement for Muslims but also aligns with ethical values emphasising safety, hygiene, and nutritional quality. Among Malaysia's increasingly health-conscious and diverse Muslim consumer base, beverages such as bubble tea are gaining popularity, raising questions about their alignment with both halal and Toyyiban (ethical and wholesome) standards. This conceptual paper examines the determinants of halal purchase intention in the context of bubble tea consumption, drawing on the Theory of Planned Behaviour (TPB) as the foundational theoretical framework. Theory of Planned Behaviour is extended by incorporating "food knowledge" as an additional antecedent to attitude, subjective norms, and perceived behavioural control. Methodologically, this paper adopts a conceptual approach by synthesising prior empirical and theoretical literature to develop a research model. This model is intended to be empirically tested in subsequent

research through quantitative data collection from Malaysian Muslim consumers. The findings of the conceptual analysis are expected to offer both theoretical contributions by extending TPB in the halal context and practical implications for marketers, halal certification bodies, and policymakers in promoting ethical beverage consumption practices.

## Paper Title 21: Impact of Empty Nest Syndrome On Parental Mental Health: Moderating Role of Coping Styles

Authors: Haifa Zafar

Abstract: Empty nest syndrome is an unhappy sad feeling and negative emotional disturbance which parents experience when their children leave them and it in turn affects their mental health. According to studies, there is need to study single parents and elderly parents who are living in shelter homes. According attachment theory, the bond between parents and children has a huge impact on parents' mental health. Coping styles assume a pivotal part in how parents adjust to the difficulties of empty nest syndrome and keep up with their mental health. Thus, in the current study moderating role of coping styles was studied. Cross-sectional survey research design was used. A sample of 200 parents were collected including single parents as well, through purposive sampling techniques. Individuals with age above 60 years were included in the study. Empty Nest Syndrome Questionnaire-Indian Form (ENS-IF), Mental Health Inventory (MHI-5), and Simplified Coping Styles Questionnaire alongside the demographic data sheet and consent form was administered. Collected information was analysed through SPSS and Process Macro using correlation, Regression, t-test, and moderation analysis. Future researchers can develop interventions to improve coping styles so that mental health of empty nester parents could be enhanced.

## Paper Title 22: Liposomal Nano delivery targeting CXCR4 for the Effective Treatment of Peritoneal Fibrosis

Authors: Hasnat Muhammad, Khan Asifullah, Raza Faisal, and Minjie Sun

Abstract: Peritoneal dialysis (PD) is an effective and well-established renal replacement therapy presently used for patients with endstage kidney disease. However, exposure to nonphysiological fluids during long-term PD causes deterioration and alteration to peritoneal membranes and eventually fibrosis. Peritoneal fibrosis (PF) is accompanied by ultrafiltration failure, resulting in termination of PD in patients. Transforming growth factor beta (TGF-β) regulates the expression of stromal cell-derived factor 1 (SDF-1α) and its receptor C−X−C

chemokine receptor type 4 (CXCR4) on human peritoneal mesothelial cells (HPMCs), resulting in an increased migratory potential of HPMCs and extracellular matrix (ECM) deposition in the scar tissue and eventually fibrosis. Because SDF-1α/CXCR4 activation has a vital role in the pathogenesis of PF, codelivery of a CXCR4-receptor targeting agent with an antifibrotic agent in a single nanocarrier can be a promising strategy for treating PF. Here, for the first time, AMD3100 (AMD), a CXCR4-receptor antagonist, was coformulated with sulfotanshinone IIA sodium (STS IIA) into a liposome (STS-AMD-Lips) to develop a CXCR4 receptor targeting form of combination therapy for PF. CXCR4 targeting increased the ability of liposomes to target fibrotic peritoneal mesothelial cells overexpressing CXCR4 and facilitated the ability of STS IIA treatment at the fibrotic site. The in vivo studies revealed the precise biodistribution of the liposomes to peritoneum. Significant reduction of the morphological lesions and decreased level of ECM proteins were observed in rats treated with STS-AMD-Lips, proving that the liposomal nanocarrier has excellent ability to reverse PF. It has been concluded that the STS-AMD-Lips exhibit specific peritoneal targeting ability and could be used to improve STS-AMD combination delivery for the treatment of PF.

## Paper Title 23: A Generalized Variational Joint Image Segmentation and Registration Model

Authors: Laiba Iftikhar, Haider Ali, Lavdie Rada

Abstract: Image segmentation and registration are critical and interrelated processes, particularly in the medical domain. This paper introduces a novel variational model designed to address these challenges effectively. The suggested framework is proficient of processing visual data with one or multiple objects while ensuring accurate registration of internal structures within those objects. A key innovation is the incorporation of generalized averages, which extend the capabilities of Chan-Vese (CV) averages to accommodate images with varying intensity backgrounds. The model is specifically tailored for monomodal image registration. To evaluate its performance, the generalized model is evaluatedon both clinical and artificial dataset, with outcomes presented through qualitative and quantitative analyses, demonstrating its superiority over existing methods.

## Paper Title 24: Automated Detection, Measurement, and Classification of Coronary Artery Plaque Using AI Transformer

Authors: Majid Khan, Sheeraz Ahmad, Ghassan Hasnain.

Abstract: Coronary Artery Disease (CAD) is a leading cause of morbidity and mortality worldwide, with early detection and accurate assessment of coronary plaques being crucial for effective diagnosis and intervention. Traditional methods of plaque detection and measurement, such as physician visual assessment and Quantitative Coronary Angiography (QCA), are time-consuming, subjective, and prone to inter-observer variability. This study proposes the development of an AI-driven system for real-time plaque detection, classification, and measurement during coronary angiography procedures, utilizing Deep Learning (DL) techniques. The primary objective of this research is to design and implement a DL model capable of automatically detecting plaques, classifying them into categories (calcified, soft, mixed), and measuring their dimensions (area and volume) from coronary angiographic images. The dataset for this study comprises 200 patients with 2000 angiographic images obtained from MTI HMC Peshawar, including images of the Left Anterior Descending (LAD), Left Circumflex (LCX), and Right Coronary Artery (RCA). These images are used to train and test models based on Convolutional Neural Networks (CNN) and U-Net architectures for plaque detection and segmentation, and ResNet or EfficientNet for plaque classification. The proposed system aims to provide clinicians with real-time feedback during angiographic procedures, enhancing diagnostic accuracy and efficiency. The performance of the models will be evaluated using standard metrics such as accuracy, precision, recall, Dice coefficient, and Intersection over Union (IoU). The system's real-time capability will be tested using cine angiography videos, and clinical validation will be conducted to assess the impact of the system on clinical workflows. The expected outcome of this study is the development of an automated, real-time plaque detection and classification system that can accurately measure plaque size and severity, offering a reliable tool for clinicians to make informed decisions faster and more consistently. This research aims to bridge the gap in coronary plaque diagnostics, reducing reliance on manual assessments and ultimately improving patient outcomes in the management of coronary artery disease.

## Paper Title 25: Influencer Marketing in Peshawar's Food Industry: Perspectives of Food Influencers and Restaurant Owners

Authors: Faria Shah, Amjid Khan, Muhammad Saeed

Abstract: This study explores the role of influencer marketing in Peshawar's food industry, focusing on how food influencers promote local restaurants and how restaurant owners perceive such collaborations. The research addresses a gap in academic literature, as little work has been

done on influencer marketing in Peshawar. A qualitative research method was adopted, using semistructured interviews with nine food influencers and five restaurant owners, selected through purposive sampling. Data was analyzed using thematic analysis to identify recurring patterns and themes. The study is grounded in the Source Credibility Theory, which highlights trustworthiness, expertise, and attractiveness as key factors influencing audience persuasion. Findings reveal that influencers rely on authenticity, storytelling, and engagement strategies to build trust, though paid collaborations sometimes limit honest reviews. Restaurant owners expressed mixed satisfaction, with credibility emerging as a major factor in campaign success.

This research contributes to the understanding of influencer marketing in a local context, offering practical insights for businesses and influencers on building trust and maximizing impact. It also emphasizes the importance of transparency and cultural relevance, providing a basis for future studies on audience perceptions and long-term effectiveness.

## Paper Title 26: The Effect of YouTube Videos on Vocabulary Learning in Non-Native English Speakers: A Case Study of Undergraduate Students

Authors: Haya Fatima Nawaz, Amjid Khan, Muhammad Saeed

Abstract: This study looks at how YouTube videos affect vocabulary learning for non-native English speakers. It compares undergraduate students from the English Department with those from other departments at Iqra National University in Peshawar. The main goal is to assess how well YouTube helps with vocabulary learning and to see how views and results vary among different academic backgrounds. The study used a qualitative approach, conducting focus group discussions and semi-structured interviews with 32 students who regularly use YouTube for educational purposes. The findings showed that English department students reported greater vocabulary improvement and used YouTube more effectively for language learning. In contrast, students from other departments often got distracted and found the content less applicable to their studies. The study emphasizes the need to adapt YouTube content and strategies to meet the needs of different learners.

## Paper Title 27: Evaluating Social Media Credibility & Its Influence on Political Discourse in Pakistan

Authors: Shabir Ullah Khan, Amjid Khan, Muhammad Saeed

Abstract: This study examines the role of social media, specifically X (formerly Twitter), in shaping political discourse in Pakistan amongst the major political parties and the audiences reacting to the content of their tweets. The research is based on political polarization, which explains the emergence of elite-level and masslevel polarization in digital communication. The research methodology uses convenience sampling. For the database one month (1 July to 31 July) of tweets and comments from prominent political parties, including PTI, PML-N, PPP, and ANP, are included. The analysis of the tweets and comments sees emerging themes of national security, political accountability, international engagement, and the condemnation of terrorism. The research findings reveal a strong indication of political parties relying on X (formerly Twitter) to highlight their achievements, and criticize their opponents. On the other hand, the public respond to the tweets with either strong condemnation or outright support often reverting to insults in the absence of facts. The research shows that social media platforms contribute to mass polarization by deepening existing divisions. The study emphasizes the need for political leaders to consider the long-term impact of their content on their audience and the commenters to consider a smarter approach with how they interact with online content.

## Paper Title 28: Love, Marriage, and the Media: Examining the Influence of Pakistani Dramas on Pakhtun Youth's Perceptions of Romantic Relationships

Authors: Amjid Khan, Muhammad Saeed, Noman

Abstract: This study examines the portrayal of romantic relationships in Pakistani television dramas and examines its influence on the perceptions of Pashtun youth regarding love and marriage within their cultural setting. The research is based on the Cultivation Theory, which explains that continuous exposure to media content can shape common beliefs and viewpoints among audiences. The study investigates the relationship between repeated exposure to romantic content in dramas and the development of shared attitudes among Pashtun youth towards love and marriage. A detailed research methodology was followed, utilizing a multistage sampling technique. In the first phase, major universities in Peshawar were randomly selected as clusters. Later, convenience sampling was used to select at least 15% of students from each cluster, ensuring broad representation. The findings highlight the significant impact of media, supported by statistical tools including a high R-squared value, significant ANOVA results, and relevant coefficient values. These indicators confirm a strong association between media exposure and the shaping of public perception. The study emphasizes the need for media

producers and policymakers to consider the cultural and emotional realities of Pashtun youth when presenting narratives related to love and marriage.

## Paper Title 29: Public Relations Perspective: Exploring the Impact of Internal Public on Image of Public and Private Hospitals in Peshawar

Authors: Asif Ali, Muhammad Saeed, Amjid Khan

Abstract: This qualitative study investigates the impact of internal public relations (PR) on the image of public and private hospitals in Peshawar, Pakistan. It focuses on understanding hospital employees' perceptions, attitudes, and experiences regarding internal PR efforts and their influence on hospital image. Through stakeholder theory, the study explores how employee satisfaction, commitment, and communication strategies affect hospital image. Interviews were conducted with a diverse sample including doctors, paramedics, receptionists, security guards, patients, and public relations officers. Findings reveal distinct perceptions between public and private hospitals: private hospitals generally exhibit positive workplace environments and effective communication channels, enhancing organizational cohesion and morale. In contrast, public hospitals face challenges such as inadequate resources and perceived administrative issues, impacting employee satisfaction and overall hospital image negatively. Recommendations include improving communication systems, enhancing staff training, and addressing corruption allegations in public hospitals to enhance stakeholder relationships and organizational effectiveness. The study underscores the critical role of internal PR strategies in shaping hospital image and stakeholder perceptions, providing insights for strategic management practices aimed at organizational excellence and stakeholder satisfaction.

## Paper Title 30: Concentration of Homogeneity In Content And Limitation Of Audience Choice Due To Media Cross Ownership: Case Study Of Jang Group

Authors: Fahad Hussain, Muhammad Saeed, Amjid Khan

Abstract: This research examines the concentration of homogeneity in content and the limitation of audience choice due to media ownership, using the Jang Group as a case study. The Jang Group is a media conglomerate that owns various media outlets in Pakistan, including newspapers, TV channels, and websites. The study uses content analysis to analyze the

homogeneity of news content of Daily Jang, The News and Geo News owned by the Jang Group. As the media shape public opinion, it matters a lot who controls the information medium and how much of it is concern with a single media organization. While there has been a significant amount of research conducted on cross-media ownership all over the world, less work has been done on media concentration in Pakistan. Therefore, the purpose of this study was to ascertain the effects of Pakistan's media. The English, Urdu dailies along with GEO News TV of Jang Media Group were considered for this study. This study employed a qualitative research methodology, and the data were compiled using a data coding sheet. The findings reveal a high level of homogeneity in news content across different media outlets owned by Jang media group, indicating a concentration of editorial control that leads to limit the audience choice. The study contributes to the debate on media ownership concentration and its impact on the media landscape and democratic society.

## Paper Title 31: Analyzing the Effectiveness of Community Radio in Building Trust and Encouraging Polio Vaccination in District Bajaur

Authors: Saad Shafiq, Muhammad Saeed, Amjid Khan

Abstract: This study explores how community radio can support public health. It pays special attention to the polio vaccination program in District Bajaur, Pakistan. The focus is on two local stations, Radio Pakhtunkhwa Bajaur and Radio Shamal Bajaur. The research looks at how these stations build trust and encourage parents to vaccinate their children. Even with regular vaccination campaigns, doubts and misinformation still exist in Bajaur. Many families do not fully understand why polio vaccination is important. The study finds that radio can be a strong tool for public health, especially in remote areas. But awareness alone is not enough. People also need to know why vaccination matters and how it protects children. Radio already holds credibility in these communities. That trust can be used to challenge false beliefs. Interactive formats like live call-in shows and community programs are especially useful. Public service messages work better when they use local styles. Short dramas, stories, and interviews with familiar voices connect more deeply with people. This research gives practical guidance for using community radio in rural health campaigns. It shows that thoughtful and engaging content can close knowledge gaps, build trust, and support the fight against polio.

## Paper Title 32: Representation of Minorities in Pakistani Television: Perceptions of the Christian Community in Islamabad on Lahore Church Blast Coverage

Authors: Muhammad Saeed, Zafar Iqbal, Shahab Ali.

Abstract: This study looks at how minorities are shown on Pakistani electronic media. It mainly focuses on how the Christian community in Islamabad felt about the media coverage of the Lahore Church blast. To understand their views, questionnaires were randomly given to members of the Christian community in Islamabad. The response rate was 84.16 percent. The people who took part were aged between 15 and 30 years or older. The data was analyzed using SPSS. Descriptive analysis was used to see how often certain views appeared. The findings showed that the way television covered the incident had a strong effect on the Christian community. Many of them felt disturbed. Some were influenced in ways that pushed them toward fear or even anger. The results show that television can shape how minorities feel during sensitive events. For future research, the study suggests looking more closely at how social influence works in such situations. It also recommends comparing the effects of social influence with the role of television in shaping public opinion, especially when it comes to how minorities are shown during times of crisis.

## Paper Title 33: Optimized Learning Platform for Connectivity Limited Educational Environments

Authors: Neha Khurram, Fazal Malik, Salman Ali Khan, Muhammad Qasim Khan

Abstract: The digital divide is another major challenge towards fair education, especially in areas that have low internet access. Low-bandwidth environments do not suit traditional Learning Management Systems (LMS) because the data consumption is high and the loading time is also quite slow. The current paper is based on Edu-Access, an optimized LMS that will work effectively under the low-bandwidth conditions (100 500 kbps) that are common in rural areas of Pakistan. The system is developed with the MERN stack (MongoDB), Express.js, React, Node.js) and utilizes concepts of lazy loading and efficient caching and lightweight web interface design to provide a seamless experience when accessing any educational content. Examples of these features are quiz and exam management, study materials (videos, notes, and books), discussion forums, and performance analytics. Pilot testing has shown complete stability in what the core capabilities consist of, and user acceptance survey has shown 95.8%satisfaction by the

core learners in the rural area. Offline mode, mobile app development and artificially intelligent personalization are all aspects of future leveraging to close the gap in education.

## Paper Title 34: Predictive Modelling of Crop Yields through Data Mining Approaches

Authors: Zain Shaukat, Aqib Mehmood, Waqas Ahmand, Hooria khan, Mubashir Zainoor, Salman Ali khan

Abstract: By analysing various crops under specified environmental and agronomic conditions, this study investigates the application of data mining methods to predicting crop yields. The main goal is to figure out how factors like temperature, rainfall, cultivated area, and pesticide use affect crop yield. More specifically, the goal is to figure out if a crop will produce enough food and if it can be grown under certain conditions. Using the Crop Yield Prediction Dataset, we made use of a variety of machine learning classifiers, such as Linear Regression, Multinomial Naive Bayes, Decision Tree, XGBoost Regressor, SGD Regressor, Kernel Ridge, Elastic Net, Bayesian Ridge, Gradient Boosting Regressor, and Support Vector Regression (SVR). These models were trained on historical crop data with attributes such as crop type, area, average temperature, average rainfall, and pesticide application. Among all the models tested, the Decision Tree Classifier demonstrated the best performance, achieving an accuracy of 93.27%, a Mean Absolute Error (MAE) of 6.73, and a Root Mean Squared Error (RMSE) of 2.59%, indicating its effectiveness and lower prediction error compared to other regression techniques.

## Paper Title 35: Selling Gender: A Critical Discourse Analysis of Gender Roles in Pakistani TV Advertisements

Authors: Qurrat-ul-Ain Farooqi

Abstract: This study highlights the importance of media in forming social norms by using Critical Discourse Analysis (CDA) to examine how gender roles are discussed in Pakistani TV ads. In a field that has received little attention in critical media studies, it examines how advertising impacts gender roles and power relations in postcolonial South Asian nations, especially in Pakistan. The study analyzes five Pakistani brand advertising campaigns—Fair & Lovely, Surf Excel, Ariel, Always, and Olpers—using Norman Fairclough's three-dimensional model at textual, discursive, and social levels, focusing on how language, imagery, and narrative structures influence gender perceptions. The bulk of ads still upholds traditional gender standards regarding attractiveness, household duties, and emotional labor, despite the fact that others portray women in progressive

roles. These results support more general debates in South Asia about gender equality, media literacy, and critical pedagogy. The research ultimately aims to deepen understanding of the media's role in constructing gender roles and to advocate for more equitable representations in advertising.

## Paper Title 36: Race and identity: An Analysis of Lacanian lack approaches to Burnt Shadows

Authors: Fazal Ghufran, Zia Ullah, Anayat Ullah, Qurratul Ain Farooqi

Abstract: This study employs Lacanian psychoanalysis—especially the constitutive notion of lack—to examine how Kamila Shamsie's Burnt Shadows unsettles racial identity across imperial and post-9/11 geographies. By foregrounding the psychic mechanics of racialization the study bridges psychoanalysis and postcolonial race critique. Scholarship on Shamsie emphasizes trauma and transnationalism, but offers no sustained Lacanian account of racial subjectivity. (1) how racist ideology functions in the novel's social and intimate scenes; (2) how lack and desire mediate racial identity formation. Close readings of pivotal episodes (Nagasaki's aftermath; Delhi and Karachi displacements; Cold War Berlin; post-9/11 New York) paired with Lacanian concepts—symbolic order, objet a, fantasy, enjoyment—track patterns of interpellation and misrecognition. Recurrent misreading of bodies, name-changes, accent-shifts, and border encounters form a pattern in which subjects seek the Other's approval while disavowing constitutive lack; textual evidence shows fantasy suturing racial incoherence yet repeatedly failing. Racist ideology operates through enjoyment and prohibition to fix subjects in racial positions, but Shamsie's narrative exposes their contingency, rendering race fluid, relational, and historically wounded. The study reframes racial identity as a negotiated psychic formation shaped by history and law, offering a portable analytic for postcolonial fiction. The abstract narrows scope to racial subjectivity, clarifies theoretical lexicon, and specifies scenes as evidentiary anchors to strengthen coherence and replicability.

## Paper Title 37: Social Media Growth Fuels Gen Z Shift to Engagement Over Accuracy

Authors: Muhammad Aqib, Anum Hamid, Sheeraz Ahmed

Abstract: In today's digital era, young people have easy access to vast amounts of information through online platforms, which influences their learning, communication, and social lives. Digital media offers numerous benefits, also increases exposure to misinformation and fake news due

to the limited regulation and lack of fact-checking. The exploratory nature of this research study, a qualitative design specifically, focus group discussion to gather in-depth insights from selected members of Generation Z who actively use social media. It explored participants' experiences, motivations, and decision-making processes when sharing content online. The collected data is analyzed thematically to identify recurring patterns, attitudes, and underlying factors influencing their behaviors, thereby offering a deeper understanding of the issue.

## Paper Title 38: Supervised Single-Channel Speech Enhancement Using U-NET-BILSTM

Authors: Ahmed Usman, Talha Ali, Najvia

Abstract: Background noise in both indoor and outdoor environments poses a major challenge to speech intelligibility, affecting applications such as telecommunications and hearing aids. To mitigate this, speech enhancement (SE) algorithms aim to improve the clarity of speech signals by suppressing background noise. For real-time applications, SE systems must maintain low computational complexity and minimal latency. Recent developments in deep learning (DL) have led to significant progress in SE, especially under non-stationary and complex noise conditions. Single-channel DL-based SE models are particularly attractive due to their simplicity and hardware efficiency. This paper proposes a hybrid deep learning architecture that combines a U-Net framework with a Bidirectional Long Short-Term Memory (BiLSTM) layer. The U-Net captures spatial and spectral features through its encoder-decoder structure, while the BiLSTM models temporal dependencies in both directions, enhancing speech intelligibility. Objective evaluations using PESQ, STOI, and ESTOI confirm the effectiveness of the proposed model. Compared to the noisy baseline (PESQ: 1.9589, STOI: 0.9234, ESTOI: 0.7953), our U-Net-BiLSTM model achieved improved scores of 3.1123, 0.9513, and 0.9435, respectively. These results demonstrate substantial gains in both perceived quality and intelligibility, highlighting the potential of the proposed architecture for robust speech enhancement in realworld environments.

## Paper Title 39: Exploration of Deep Learning Based Recognition for Urdu Text

Authors: Sumaiya Fazal, Sheeraz Ahmed

Abstract: Urdu is a cursive script language and has similarities with Arabic and many other South Asian languages. Urdu is difficult to classify due to its complex geometrical and morphological structure. Character classification can be processed further if segmentation technique is efficient,

but due to context sensitivity in Urdu, segmentation-based recognition often results with high error rate. Our proposed approach for Urdu optical character recognition system is a component-based classification relying on automatic feature learning technique called convolutional neural network. CNN is trained and tested on Urdu text dataset, which is generated through permutation process of three characters and further proceeds to discarding unnecessary images by applying connected component technique in order to obtain ligature only. Hierarchical neural network is implemented with two levels to deal with three degrees of character permutations and component classification our model successfully achieved 0.99% for component classification.

## Paper Title 40: Impact of AI in Recrafting the Education System of Pakistan

Authors: Talea haroon

Abstract: This venture aims to examine the transformative impact of Artificial Intelligence (AI) on Pakistan's education system by proposing a comprehensive action plan to improve teaching methodologies and learning outcomes. It explores how AI-powered tools can automate administrative tasks, provide real-time student analytics, and enable personalized learning through adaptive platforms tailored to Pakistan's diverse linguistic and cultural contexts. The study emphasizes the need for teacher upskilling in AI integration, the development of AI-enabled smart classrooms, and the use of data-driven policies for systemic reform. By focusing on practical implementation and inclusivity, this research outlines a collaborative framework involving government bodies, educators, and technology stakeholders to modernize Pakistan's education landscape, enhance accessibility, and promote lifelong learning. Ultimately, it positions AI as a critical enabler of educational quality, equity, and innovation.

## Paper Title 41: ACONN: A Metaheuristic-Driven Neural Network for Better Classification

Authors: Maria Ali, Muhammad Danyal, Dr. Latif Ullah, Dr. Sami Ullah, Tayyaba Riaz

Abstract: Artificial Neural Networks (ANN), particularly the Back-Propagation Neural Network (BPNN), are widely used for learning mappings between input and output data. BPNN is typically trained using gradient descent, but this approach often suffers from local minima problems. The Levenberg-Marquardt (LM) algorithm improves convergence speed but still relies on derivatives, making it prone to local minima as well. To overcome this, metaheuristic optimization methods have been explored. Ant Colony Optimization (ACO), a meta-heuristic, inspired by the foraging

behavior of ants, provides global search capability but may yield suboptimal solutions due to its stochastic nature. To address these limitations, hybrid model such as ACONN are proposed and evaluated on two benchmark classification datasets. The results show that the proposed models achieve better accuracy, lower Mean Squared Error (MSE) and reduced standard deviation (SD) compared to traditional BPNN, LM, and ERN

## Paper Title 42: Impact of Anticipatory Grief on Quality of Life among Caregivers of Thalassemia Patients: Mediating role of Physical Activity

Authors: Hifza Fatima & Sadaf Ahsan

Abstract: Caregivers of patients with chronic illness such as thalassemia face unique challenges in their life. During the caretaking of the patient, caregivers face anticipatory grief due to the fear of loss. The goal of current study was to investigate the impact of anticipatory grief on quality of life of caregivers of thalassemia patients with the mediating role of physical activity. Difference across gender in a proposed relationship were also studied. Anticipatory grief scale(Theut et al., 1991) , international physical activity questionnaire (Geneva, 1998) & quality of life scale (Flanagan, 1970) alongside the demographic sheet and written informed consent form was employed for collecting data among 300 caregivers using cross sectional survey research design that include multiple cities of Punjab. Results indicate that anticipatory grief have significant negative relationship with quality of life and physical activity. Physical activity has significant positive relationship with quality of life. Results also indicate that women show significantly higher level of anticipatory grief than men. Men show higher level of quality of life then women. The findings of the study provided strong empirical support for the predicted role of anticipatory grief on quality of life among caregivers. These findings further highlight that physical activity should be part of parents life to deal with grief related to health of child.

## Paper Title 43: Impact of Anticipatory Grief on Quality of Life among Caregivers of Thalassemia Patients:Moderating role of Family Support

Authors: Hifza Fatima & Sadaf Ahsan

Abstract: Caregivers of patients with chronic illness such as thalassemia face unique challenges in their life. During the caretaking of the patient, caregivers face anticipatory grief due to the fear

of loss. The goal of current study was to investigate the impact of anticipatory grief on quality of life of caregivers of thalassemia patients with the moderating role of family support. . Difference across gender in a proposed relationship were also studied. Anticipatory grief scale, Family Support Scale & quality of life scale alongside the demographic sheet and written informed consent form was employed for collecting data among 300 caregivers using cross sectional survey research design that include multiple cities of Punjab. Results indicate that anticipatory grief have significant negative relationship with quality of life. Quality of life has significant positive relationships with family support and negative relationships with anticipatory grief. Physical quality of life, psychological quality of life, social and environmental quality of life has a significant positive relationship with family support and significant negative relationship with anticipatory grief. The findings of the study provided strong empirical support for the predicted role of anticipatory grief on quality of life among caregivers. Whereas, family support acts as a significant moderator in the relationship between quality of life and anticipatory grief. Family support significantly predict quality of life in a positive direction. Understanding the role of quality of life and anticipatory grief will serve as empirical evidence for researchers and mental health professionals.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