

**ABSTRACT BOOK OF**

**11<sup>th</sup> INTERNATIONAL CONFERENCE ON  
DISTRIBUTED COMPUTING,  
INFORMATION SYSTEMS AND  
INTERNET OF THINGS (ICDCII)  
2021**

**11<sup>th</sup> INTERNATIONAL CONFERENCE ON  
DISTRIBUTED COMPUTING, INFORMATION  
SYSTEMS AND INTERNET OF THINGS (ICDCII)**

**On Wednesday and Thursday 20<sup>th</sup> and 21<sup>st</sup> October,  
2021 AT 02:00 PM (PST)**

**Board of Governors,  
Ilma University**

**Imran Ismail**  
*Patron & Governor of Sindh*

**Kanwal H. Lakhani**  
*Chairperson*

**Noman Abid Lakhani (T.I.)**  
*Chancellor*

**Dr. Mansoor Uz Zafar Dawood**  
**Justice Fahim Ahmed Siddiqui**

**Dr. A.Q Mughal**

**Dr. Asim Hussain Dr.**

**Asad Ali Sheikh**

**Syeda Marvi Faseeh**

**Sharjeel Inam Memon**

**Mr. Rafik Ahmed Burrio**

**Mr. Agha Shahab Ahmed Khan**

**Dr. Farhan Essa Abdullah**

**Dr. Adnan Abid**

**Mr. Faraz Lakhani**

**Mr. Hammad Tahir**

**Mr. Shakil Qadir**

**Dr. Jawed Iqbal Dr.**

**Asif Khan**

**Mr. Farid Ali Khan**

**Mr. Yaseen**

**Syed Kashif Rafi**

**Mr. Fawad M. Butt**

<b>11<sup>th</sup> INTERNATIONAL CONFERENCE ON DISTRIBUTED COMPUTING, INFORMATION SYSTEMS AND INTERNET OF THINGS (ICDCII)</b>	
<b>Department of Computer Science/ Software Engineering</b>	
<b>Date: Wednesday 20th October, 2021</b>	
<b>Time</b>	<b>Day One</b>
<b>2.00 PM-2.30 PM</b>	<b>Guests to be online</b>
<b>2.30 PM</b>	<b>Recitation of Holy Quran</b>
<b>2:35 PM-2:40 PM</b>	<b>NATIONAL ANTHEM</b>
	<b>Welcome address</b>
	<b>Vice Chancellor - ILMA University - Prof. Dr. Mansoor uz Zafar Dawood</b>
<b>2:40-2:45</b>	<b>Address by Conference chair</b>
<b>2:45-2:55</b>	<b>Address by the chief guest</b>
<b>Session 1</b>	
Time: 3:00 PM - 4:10 PM	
Session Chair: Prof. Dr. Kamran Taj Pathan , UoS Co-Chair: Dr. Qasim Ali Arian MUET Jamshoro	
<b>3:00 PM - 3:15 PM</b>	<b>Keynote Speaker 1: Dr. Abdul Sattar HOD Computer Systems IBA Sukkur Pakistan</b>
<b>3:15 PM - 3:30 PM</b>	<b>Paper id 101</b> <b>Presenter: Ghulam Rasool Mastoi, Qasim Ali, Gul Bano and Isma Farah MUET Jamshoro Pakistan</b> <b>Topic: A Legitimate ML, Framework for Monitoring DDOS Attacks: Using Real Time Approach</b>
<b>3:30 PM- 3:35 PM</b>	<b>Q&amp;A</b>
<b>3:35 PM - 3:50 PM</b>	<b>Paper id 102</b> <b>Presenter: Aqsa Nisar, Jitandar Kumar Pabani, Waheedudin Hyder and Subhash Sagar, Dawood University Karachi</b> <b>Topic: System Architecture for Internet of Things (IoT) Based Smart Agriculture Monitoring</b>
<b>3:50 PM - 3:55 PM</b>	<b>Q&amp;A</b>
<b>3:55 PM - 4:10 PM</b>	<b>Keynote Speaker 2: Prof. Dr. Krishan Lal Khatri NED University Karachi</b>
<b>ILMA University Video</b>	
<b>Session 2</b>	
Time : 4:30 PM - 5:40PM	

Session Chair: Prof. Dr. Khalil ur Rehman Khumbati, Dean FET UoS Jamshoro, Session Co-Chair : Dr. Zahoor Hussain Shah, HOTD Indus University Karachi	
<b>4:30PM - 4:45PM</b>	<b>Keynote Speaker 1 : Prof. Dr. Akram M. Zeki International Islamic University, Kaula Lumpur, Malaysia</b>
<b>4:45PM - 5:00PM</b>	<b>Paper id 103 Presenter: Qamarul Arfeen, Asif Kamran and Najamul Arifeen University of Karachi Topic: Digitization of National Institutions Process in Pakistan</b>
<b>5:00 PM - 5:05PM</b>	<b>Q&amp;A</b>
<b>5:05 PM - 5:20 PM</b>	<b>Paper id 104 Presenter: Adnan Alam Khan, Usman Waheed, Tahira Adnan Topic: Unsusceptible Agile development model in CoVID-19 era</b>
<b>5:20 PM - 5:25PM</b>	<b>Q&amp;A</b>
<b>5:25 PM - 5:40PM</b>	<b>Keynote Speaker: Dr. Mujtaba Sheikh Quest Nawab Shah</b>
<b>ILMA University Video</b>	
Session 3	
Time: 5:40 PM - 6:50PM	
Session Chair: Prof. Dr. Samina Rajpar Director ORIC SALU Khairpur, Session Co-Chair: Dr. Arjumand Bano Soomro KSA	
<b>5:40PM - 5:55PM</b>	<b>Keynote Speaker 1: Prof. Dr. Zeeshan Bhatti Director ORIC UoS Jamshro.</b>
<b>5:55 PM - 6:10 PM</b>	<b>Paper id 105 Presenter: Shazia Samoon and Atia Bano Memon Lar Campus UoS Badin Topic: User Acceptance of Internet of Things in Higher Education Institutes in Pakistan</b>
<b>6:10 PM - 6:15PM</b>	<b>Q&amp;A</b>
<b>6:15 PM - 6:30 PM</b>	<b>Paper id 106 Presenter: Adnan Alam Khan, Suresh Kumar, Dr. Salman Ahmed Topic: Smart shopping carts by Fitting alerts</b>
<b>6:30 PM - 6:35PM</b>	<b>Q&amp;A</b>
<b>6:35 PM - 6:50PM</b>	<b>Speaker 2: Dr. P. Kiran Sree HOD Shri Vishnu Engineering College for Women Vishnupur, AP India</b>
<b>ILMA University Video</b>	
Session 4	
Time: 6:50 PM - 8:00PM	
Session Chair: Prof. Dr. Asadullah Shah, International Islamic University, Kaula Lumpur, Malaysia, Session Co-Chair Prof. Dr. Muniba Memon Quest Nawab Shah	
<b>6:50PM - 7:05PM</b>	<b>Keynote Speaker 1 : Prof. Dr. Adam W. Skorek Université du Québec à Trois-Rivières</b>
	<b>Paper id 107</b>

7:05 PM - 7:20 PM	<b>Presenter: Shah Murad Chandio, Anees Jamali, Asif Ali, Tahira Qadeer and Seema USMS Bhit Shah Sindh</b> <b>Topic: : Students Perspective on Factors affecting FY-SDP : A case study of the BSCS program at the University of Sindh</b>
7:20 PM - 7:25PM	<b>Q&amp;A</b>
7:25 PM - 7:40 PM	<b>Paper id 108</b> <b>Presenter: Humaiz Shaikh, Ali Raza, Yaqoob Khoondhar, Zulfikar Ahmed Mahar and Asadullah Shah IIUM Malaysia</b> <b>Topic: : Fog Computing Based Recovery Model for Relibale E-Healthcare Services</b>
7:40 PM - 7:45PM	<b>Q&amp;A</b>
7:45 PM - 8:00PM	<b>Keynote Speaker 2: Dr. Atia Bano Memon Laar Campus UoS Badin</b>
<b>ILMA University Video</b>	
<b>Day Two</b>	
Session 1	
Time: 2:00 PM - 3:10 PM	
Session Chair: Prof. Dr. Tariq Rahim Soomro acting Rector, IoBM, Sindh, Pakistan. Session Co-Chair: Dr. Arifa Bhutto UOS	
2:00 PM-2:15 PM	<b>Keynote Speaker 1: Prof. Dr. Asadullah Shah, International Islamic University, Kaula Lumpur, Malaysia</b>
2:15 PM-2:30 PM	<b>Paper id 109</b> <b>Presenter: Qurat-ul-ain Mastoi, Hira Farman, Ali Qureshi, Saad Ahmed, Kalsoom Mastoi</b> <b>Topic: Novel Methodology for Efficient Detection of QRS Morphology for The Cardiac Arrhythmia Classification</b>
2:30 PM - 2:35 PM	<b>Q&amp;A</b>
2:35 PM - 2:50 PM	<b>Paper id 110</b> <b>Presenter: Ms. Saira H. Faroqui, Prof Dr. Noor Ahmed Shaikh, Prof Dr. Samina Rajper, Department of Computer Science Shah Abdul Latif University, Khairpur, Sindh, Pakistan</b> <b>Topic: Architecture of POS Tagger in Sindhi Language</b>
2:50 AM - 2:55 PM	<b>Q&amp;A</b>
2:55 PM - 3:10 PM	<b>Keynote Speaker 2: Dr. Korhan Cengiz PhD College of Information Technology University of Fujairah, UAE</b>
<b>ILMA University Video</b>	
Session 2	
Time : 3:10 PM - 4:20PM	

<p>Session Chair: Prof. Dr. Sita Rani Gulzar Institute of Engineering and Technology, India. Session co-Chair Dr. Pinal Khan ICT Tando Jam</p>	
<p><b>3:10PM - 3:25PM</b></p>	<p><b>Dr. Tapalina Bhattasali St. Xavier's College, Kolkata India</b></p>
<p><b>3:25PM - 3:40PM</b></p>	<p><b>Paper id 111</b> <b>Presenter: Benish Zehra and Samina Rajapr SALU Khairpur</b> <b>Topic: E-Learners' Cognitive Skills Estimation and Development by Using Machine Learning Techniques</b></p>
<p><b>3:40 PM - 3:45PM</b></p>	<p><b>Q&amp;A</b></p>
<p><b>3:45 PM - 4:00 PM</b></p>	<p><b>Paper id 112</b> <b>Presenter: Ali Aziz, Department of Computer Science Shanghai Jiaotong University Shanghai, China M. Ans Bin Jawaid Department of Telecommunication Engineering Iqra University Karachi, Pakistan</b> <b>Topic: Inclination of Computer Virus and Anti-Virus Techniques A Short Survey</b></p>
<p><b>4:00 PM - 4:05PM</b></p>	<p><b>Q&amp;A</b></p>
<p><b>4:05 PM - 4:20PM</b></p>	<p><b>Speaker 2: Dr. Muniba Memon QUEST Nawab Shah</b></p>
<p><b>ILMA University Video</b></p>	
<p>Session 3</p>	
<p>Time : 4:20 PM - 5:30PM</p>	
<p>Session Chair: Dr. Soumi Dutta , Professor at Institute of Engineering and Management Kolkata India, Session Co Chair: Dr. Farhat Naureen Memon, University of Hafr Al-batin, Saudi Arabia</p>	
<p><b>4:20PM - 4:35PM</b></p>	<p><b>Keynote Speaker 1: Dr. Atif Farid Muhammad The University of North Carolina at Charlotte USA</b></p>
<p><b>4:35PM - 4:50PM</b></p>	<p><b>Paper id 113</b> <b>Presenter: Faisal Imran<sup>1</sup> Kuntpong Woraratpanya<sup>2</sup> Somkiat Wangsiripitak<sup>3</sup> Ufaque Shaikh<sup>4</sup> Ahmed Mateen<sup>5</sup></b> <b>Topic: Internet of Everything: Transformation of Transport Infrastructure of Pakistan</b></p>
<p><b>4:50 PM - 4:55PM</b></p>	<p><b>Q&amp;A</b></p>
<p><b>4:55 PM - 5:10 PM</b></p>	<p><b>Paper id 114</b> <b>Presenter: Jawad Hussain Awan, Asad Ali Shaikh, Kamran Dahri Faisal Akbar Khaskeli and Farman Pirzado</b> <b>Topic: The Link -Prediction:- An inter-connectivity Problem in Social Network</b></p>
<p><b>5:10 PM - 5:15PM</b></p>	<p><b>Q&amp;A</b></p>
<p><b>5:15 PM - 5:30PM</b></p>	<p><b>Keynote Speaker: Dr. Mustafa N. Elemran The British University in Dubai</b></p>
<p><b>ILMA University Video</b></p>	
<p>Session 4</p>	

Time : 5:30 PM - 6:50PM	
Session Chair: Dr. Aysh ISRA University Amman, Jordon. Session Co-Chair : Dr. Syeda Hira Naqvi IMCS UoS Jamshoro	
<b>5:30PM - 5:45PM</b>	<b>Keynote Speaker 1 : Dr. Amjad Kamboh KSA</b>
<b>5:45PM - 6:00PM</b>	<b>Paper id 115</b> <b>Presenter: Qamarul Arfeen, Asif Kamran and Najamul Arifeen UoK</b> <b>Topic: Geo Fencing an Advance way to Locate the Terrorists</b>
<b>6:00 PM - 6:05PM</b>	<b>Q&amp;A</b>
<b>6:05 PM - 6:20PM</b>	<b>Keynote Speaker 2: Dr. Sita Rani</b> <b>Gulzar Institute of Engineering and Technology, Gulzar Group of Institutes, Khanna, Punjab, India.</b>
<b>6:20PM - 6:30PM Thanking note by Dean Faculty of Science and Technology ILMA University, Prof. Dr. Asad Ali Shaikh</b>	

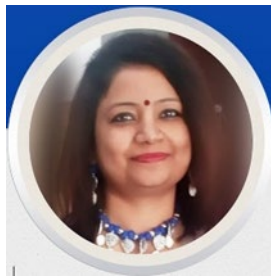


## KEY NOTE SPEAKERS



**Dr. Abdul Sattar, HOD Computer Systems IBA Sukkur Pakistan**

Dr. Abdul Sattar got his PhD degree from Dongguk University, South Korea. He has more than 13 years of teaching and research experience at university level. He has been with Sukkur IBA University for the past 9 years. His research interests include Nanotechnology, Graphene and other 2D materials, Photodiodes and Photodetectors, Optical Fiber Communication, Digital Logic and Design, Data Communication and Computer Networks. Dr. A.Sattar has also published his research work in high impact factor international research journals, international conferences and domestic journals.



**Dr. Tapalina Bhattasali, St. Xavier's College, Kolkata India**

Dr. Tapalina Bhattasali is working as Assistant Professor and Head of Information Technology Department at St. Xavier's College (Autonomous), Kolkata, India. She obtained her PhD in Computer Science & Engineering from University of Calcutta in collaboration with AGH University of Science & Technology, Poland. Her PhD thesis is based on IoT based framework and its security features. She received Doctor of letters (D.Litt.) honorary degree in recognition and appreciation of the contribution in the field of "Secured Internet of Things Framework; Case Study: Rural Healthcare in India" (based on the field works at remote villages of Birbhum, Sundarbans) from IEU, Maldives, working for SAARC countries to eradicate poverty and empowering Economics. She received a number of national and international awards in teaching and research excellence category like Global Outreach Research Award as "Young Researcher in Computer Science & Engineering"; Prestigious IRDP Award for "Teaching and Research Excellence"; National Award of Excellence. She has many years of experience in academia. She teaches various courses in post-graduation, doctoral and industry level on artificial intelligence, machine learning, deep learning, and network service management and optimization techniques. She is the member of ACM, ISOC, and IAENG. Dr. Bhattasali has published widely in well-regarded national and international journals and edited volumes and conference proceedings. She has presented the results of her research work at numerous national and international conferences in India and abroad. Dr. Bhattasali has delivered her lecture as keynote speaker, invited speaker, resource person in various national and international events. She has been invited as resource person in many national and international webinars, seminars, conferences, workshops. Her main research interest lies in the field of Cloud-IoT, artificial intelligence, machine learning, deep learning, edge intelligence, data analytics, blockchain, swarm intelligence. She is the editor and reviewer of many national and international peer-reviewed journals like IEEE, Inderscience. She has already research collaboration with Bangladesh, Poland, and Azerbaijan.



**Prof. Dr. Akram M. Zeki, International Islamic University, Kaula Lumpur, Malaysia**

Akram M. Zeki obtained B.Sc. from the University of Jordan, Amman, Jordan in 2000, and Master in Computer Graphics from the Faculty of Computer Science and Information Technology at University Putra Malaysia in 2004. His Ph.D. was from the Faculty of Computer Science and Information System, University Technology Malaysia in 2009. He did post doctorate research at Kulliyyah of Information and Communication Technology, International Islamic University Malaysia (IIUM) in 2009. Currently, he is an Associate Professor at the Kulliyyah of Information and Communication Technology, IIUM, and Deputy Director of Centre for Islamisation (CENTRIS). His research interests include: Watermarking, Steganography, Information Security and Image Processing and Multimedia. He is very interested to work in the field of IT and Islam and develop Islamic Applications. Apart from supervising Masters and Ph.D. students, he is also involved in research. Dr. Akram has published seven books, 20 articles in journals, 45 book chapters and more than 75 conference papers. Besides that, he has received awards at both university and national levels.



**Dr. Mustafa N. Elemran, the British University in Dubai**

Mostafa Al-Emran received his Ph.D. degree in Computer Science from Universiti Malaysia Pahang and the MSc degree in Informatics from The British University in Dubai (with distinction). He is among the top 2% scientists in the world, according to the report published by Stanford University in October 2020. He got the Excellent Publication Award from the Faculty of Computer Systems & Software Engineering, Universiti Malaysia Pahang in 2018 and the Academic Excellence Award from Dubai International Academic City in 2015. With over 70 research articles published in highly top-tier journals, conferences, and books, he received over 2480 citations and 31 h-index according to Google Scholar metrics. Most of his publications were indexed under the ISI Web of Science and Scopus. He has edited a number of books published by Springer. He is also a certified recognized reviewer by several leading journals in Elsevier. Al-Emran has delivered a number of talks at both international and national levels.



**Prof. Dr. Adam W. Skorek Université du Québec à Trois-Rivières**

Dr. Adam completed the Master of Electrical Engineering Program at Białystok University of Technology (Poland) receiving both Master and Engineer degrees. He obtained Doctor of Technical Sciences Degree in Electrical Engineering at the Warsaw University of Technology. In 1987, he joined the University of Québec at Trois-Rivières, where he is currently a Full Professor and former Head of the Electrical and Computer Engineering Department. Former Director and current Member of the UQTR's Research Group on Industrial Electronics, he was a Member of the Board of Directors of the University of Québec at Trois-Rivières and the Board of Governors of the University of Québec. His research works include supercomputers applications to the electro-thermal applications and complex problems solutions in industrial environment. More specifically he worked on numerical algorithms with the use of high performance computing (HPC) for the analysis of the thermal problems in electrical, electronics and Nano-electronics devices. He has made contributions to the numerical analysis of electro-thermal phenomena exploring and applying various techniques to the power electronics devices design and industrial process control. This contribution is reflected in the number of papers published and presented in journals and conferences including IEEE Xplore Digital Library. He was a Chair of Canadian Heads of Electrical and Computer Engineering. Fellow of the Engineering Institute of Canada, he is a recipient of the IEEE RAB/MGA Leadership Award and the IEEE Canada W.S. Read Outstanding Service Award



**Dr. Atia Bano Memon, Laar Campus UoS Badin**

Dr. Atia Bano Memon UoS Badin Campus She is working in faculty of engineering and technology university of Sindh for last twenty years. She has done PhD in computer science from Germany.



**Prof. Dr. Asadullah Shah, International Islamic University, Kaula Lumpur, Malaysia**

Professor Dr. Asadullah Shah started his career as a Computer Technology University of Sindh as lecturer in 1986. Before joining IIUM in January 2011, he worked in Pakistan as a full professor (2001-2010) at Isra University, IOBM and SIBA. He earned his Ph.D. in Multimedia Communication from the University of Surrey UK in 1998. During his 28 years of teaching, he has taught courses in the fields of Electronics, Computers, Multimedia Communication and Research Methodologies at undergraduate and postgraduate levels. He has held various administrative positions throughout his career as Head of Department, Dean, controller of examinations, member board of governors, member selection boards, and expert on various forums. He has published 180 articles in ISI and Scopus indexed publications. In addition

to that, he has published 12 books. Since 2012, he has been working as a resource person and delivering workshops on proposal writing, research methodologies and literature review at Student Learning Unit (SLeU), Faculty of Economics and KICT, International Islamic University Malaysia and consultancies to other organizations. He is the winner of many gold, silver and bronze medals in his career and reviewer for many ISI, and Scopus indexed journals, and other journals of high repute. Currently, he is supervising many Ph.D. projects in KICT in the field of IT and CS.



**Dr. Korhan Cengiz, College of Information Technology University of Fujairah, UAE**

Dr. Korhan Cengiz Turkey Korhan Cengiz received the B.S. degree in electronics and communication engineering from Kocaeli University, Kocaeli, Turkey, in 2008, the M.S. degree in electronics and communication engineering from Namik Kemal University, Tekirdag, Turkey, in 2011, and the Ph.D. degree in electronics engineering from Kadir Has University, Istanbul, Turkey, in 2016., Since 2018, he has been an Assistant Professor with the Electrical-Electronics Engineering Department, Trakya University, Edirne. He has authored over 30 articles, five book chapters, one book in Turkish.



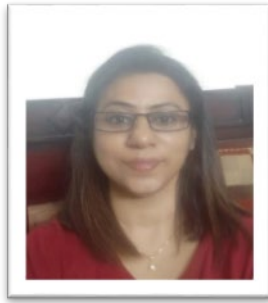
**Dr. Atif Farid Muhammad, the University of North Carolina at Charlotte USA**

Dr. Atif Farid Mohammad is an MIT certified Systems Architect and currently an Adjunct Computer Science and Data Science Professor at the University of North Carolina at Charlotte. Atif holds Ph.D., in Information Technology from University of Quebec at Chicoutimi, Canada. Atif has more than twenty one years of experience in software engineering, professional business systems analysis, design, application development and staff management for diversified business and educational organizations.



**Prof. Dr. Krishan Lal Khatri, NED University Karachi**

Dr. Krishan L. Khatri, a former Fulbright Scholar, received his Doctor of Philosophy (Ph.D) degree in Electrical Engineering from The University of Texas at Dallas, Richardson, Texas, United States in August 2017, and has over 17 years' experience in industry and academia that also includes formal teaching and research. Mr. Khatri received his Bachelor of Engineering (Electrical) from Mehran University of Engineering and Technology Jamshoro, Sindh, Pakistan, in 1999, with 1st Class, 1st Position, and Master of Science in Electronic Engineering from Sir Syed University of Engineering and Technology, Karachi, Sindh, Pakistan in 2008, with CCGPA of 4.0 out of 4.0. His research interests are machine learning, artificial intelligence, health informatics, data mining and analytics, communication systems, and automated systems in disease prediction, diagnosis, prevention, and management. He has authored several research articles in communication systems, and machine learning techniques.



**Dr. Sita Rani, Gulzar Institute of Engineering and Technology, Gulzar Group of Institutes, Khanna, Punjab, India.**

Prof. Dr. Sita Rani is working as full professor in the Gulzar Institute Engineering and Technology Ludhiana India. She is Deputy Dean of the Faculty of Computer Science. She has great experience in research and teaching. She has plenty of research publications.



**Dr. POKKULURI KIRAN SREE**

Dr. Pokkuluri Kiran Sree earned a B.Tech. degree in Computer Science & Engineering with distinction from JNTU Hyderabad. He has obtained M.E in Computer Science & Engineering with distinction from Anna University. He has obtained his Ph.D. in Artificial Intelligence from Jawaharlal Nehru Technological University-Hyderabad. His interests include Cellular Automata, Parallel Algorithms, Artificial Intelligence, and Compiler Design. He was the reviewer for some reputed International Journals and IEEE Society Conferences on Artificial Intelligence, Image Processing and Bioinformatics. His bibliography was listed in Marquis Who's Who in the World, 29th Edition (2012), USA. He is the recipient of Bharat Excellence Award from Dr. GV Krishna Murthy, Former Election Commissioner of India for two times. He is also recipient of Rashtrya Ratan Award. He received Active Reviewer Award from International Journal of Information Technology which is SCI indexed. He is also selected for GLORY OF EDUCATION EXCELLENCE AWARD 2012. He is the Board of Studies member of Vikrama Simhapuri University, Nellore in Computer Science & Engineering stream. He is the editor in chief of international journal of Parallel and Cloud Computing Research (PCCR). He has published 52 research papers in international journals and conferences. He is recognized supervisor in the stream of Artificial Intelligence for guiding Ph.D. scholars at VIT and KL universities.

**Dr. Mujtaba Sheikh, QUEST Nawabshah**



Dr. Mujtaba Shaikh is currently working as an assistant professor at Quaid-e-Awam University of Engineering Science and Technology, Nawabshah. He did B.E (Electronics) from MUET Jamshoro and MS (Telecommunications) from Hamdard University. He received his PhD degree in Communication Engineering with specialization in Wireless Communication from the University of Malaga (UMA), Malaga, Spain. He has published number of research articles in national and international journals.

**Dr. Zeeshan Bhatti, University of Sindh**



Dr. Zeeshan Bhatti is working as an associate professor at the Institute of Information and Communication Technology, University of Sindh. He did PhD in the discipline of Information Technology at Kulliyah of information and Communication Technology, International Islamic University Malaysia. My expertise is in the field of 3D computer Rigging, Animation and Modelling using Autodesk Maya and 3D Studio Max. i am also working as a Character Technical Director with expertise in Character Rigging with simple fast rigs including advance more technical rigs. Supervising animation and rigging pipeline and managing the technical issues. Testing the rigs for functionality and performance. Creating Auto-Rig script using MEL to automate the process of rigging and providing advance - simplified animation controls for already pre rigged characters in the pipeline. Creating an intuitive GUI for the characters control selection.



**Dr. Muniba Memon, QUEST, Nawabshah**

I am currently working as Chairperson and Associate Professor in computer Science & Software Engineering Department, Indus University, Pakistan. Besides IU, I have been working in many international institutes as lecturer and researcher that includes; IIUM - Malaysia, SDU - Denmark, QUEST - Pakistan. I have received an undergraduate degree (B.E) in Computer System Engineering from Mehran University of Engineering & Technology (MUET) - Pakistan. M.Sc in Robot System Engineering from University of Southern Denmark (SDU) - Denmark, and Ph.D. in Computer Science from International Islamic University Malaysia (IIUM) -

Malaysia.



**Dr. Amjad Kamboh , KSA**

Amjad Ali is an energy engineer with more than 15 years of experience as an adviser, expert, manager, and trainer in commercial, domestics and industrial renewable energy/energy efficiency/energy management projects. He has a strong background in energy engineering with managerial and economic expertise.

Mr. Ali worked with USAID, UNDP, GEF, GTZ, and Government of Pakistan as an energy expert in projects for industrial clients, governmental bodies and international organizations for technical cooperation. He is an expert advisor to several state and federal ministries as well as industry and trade associations in the fields of energy efficiency and energy management.

As project manager have successfully executed complex and multidisciplinary energy-related projects and programs as well as international training and research projects in the field of renewable energy, energy efficiency, energy management, and energy audit.

## SESSION CHAIR



### **Prof. Dr. Asadullah Shan, IIUM, Malaysia**

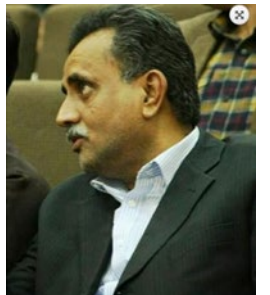
Professor Dr. Asadullah Shah started his career as a Lecturer in Computer Technology University of Sindh in 1986. Before joining IIUM in January 2011, he worked in Pakistan as a full professor (2001-2010) at Isra University, IOBM and SIBA. He earned his Ph.D. in Multimedia Communication from the University of Surrey UK in 1998. During his 34 years of teaching, he has taught courses in the fields of Electronics, Computers, Multimedia Communication and Research Methodologies at undergraduate and postgraduate levels. He has held various administrative positions throughout his career as Head of Department, Dean, controller of examinations, member board of governors, member selection boards, and expert on various forums.

He has published 180 articles in ISI and Scopus indexed publications. In addition to that, he has published 12 books. Since 2012, he has been working as a resource person and delivering workshops on proposal writing, research methodologies and literature review at Student Learning Unit (SLeU), Faculty of Economics and KICT, International Islamic University Malaysia and consultancies to other organizations. He is the winner of many gold, silver and bronze medals in his career and reviewer for many ISI, and Scopus indexed journals, and other journals of high repute. Currently, he is supervising many Ph.D. projects in KICT in the field of IT and C



### **Prof. Dr. Kamran Taj Pathan, University of Sindh**

Prof. Dr. Kamran Taj Pathan is serving as the chairman of Department of Software Engineering Faculty of Engineering and Technology, University of Sindh, Jamshoro, Pakistan. He did PhD in Computer Science from the Department of Computer Science, University of Leicester, United Kingdom. His research interests are Context-Aware Systems, Service Oriented Computing, Semantic Web, Knowledge Management, and Software Sensors.



### **Prof. Dr. Khalil-ur-Rehman Khoubhati, University of Sindh**

Prof. Dr. Khalil-ur-Rehman Khoubhati is working as the dean of Faculty of Engineering and Technology, University of Sindh, Pakistan. In 2005 he did PhD in Information Systems Evaluation and Integration in Health Informatics Department of Information Systems and Computing, Brunel University, Uxbridge, Middlesex, UK. He has authored more than 50 research articles in renowned journals. He is also the reviewer of number of top journals, such as, European Journal of Information System, Journal of Intelligent Systems, IBM journal, Journal of Management Information System.



### **Dr. Tariq Rahim Soomro, IoBM**

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Scientific Research, United Arab Emirates (UAE). His research focuses on GIS, IDNS, Distance Education, E-Commerce, Multimedia, UNICODE, WAP, P2P, Bioinformatics, ITIL, Cloud Computing, Green Computing, Big Data, IoT, Quality of Software, Telemedicine, VoIP, Databases, Programming, and Higher Education.



**Dr. Sita Rani, Gulzar Group of Institutions, India**

Dr. Sita Rani is working as a Professor - Computer Science & Engineering and Deputy Dean (Research) at Gulzar Group of Institutions, Khanna (Punjab). She has completed her B.Tech and M.Tech degrees in the faculty of Computer Science and Engineering from Guru Nanak Dev Engineering College, Ludhiana. She obtained her Ph.D. in Computer Science and Engineering from I.K.Gujral Punjab Technical University, Kapurthala, Punjab in the year 2018. She has more than 19 years of teaching experience. She is an active member of IEEE and IAEngg. She is the receiver of ISTE Section Best Teacher Award and International Young Scientist Award. She has contributed to the various research activities while publishing articles in the renowned journals and conference proceedings. She has published three international patents also. She has delivered many expert talks in A.I.C.T.E. sponsored Faculty Development Programs and organized many International Conferences during her 18 years of teaching experience. She is the member of Editorial Board of four international journals of repute. Her research interest includes Parallel and Distributed Computing, Machine Learning, and Internet of Things (IoT).



**Dr. Soumi Dutta, Institute of Engineering and Management, India**

Dr. Soumi Dutta is Associate Professor at Institute of Engineering & Management, India. She has completed her Ph.D (CST), IEST, Shibpur. She received her B.Tech (IT) and M.Tech (CSE) securing 1st position (Gold medallist), from MAKAUT. She is certified as Publons Academy Peer Reviewer, 2020 and Certified Microsoft Innovative Educator, 2020. Her research interests are Data Mining, Information Retrieval, Online Social Media Analysis and Image Processing. She has published 30 conference and journal papers in Springer, IEEE, IGI Global, Taylor & Francis etc. She has 5 Book Chapters in Taylor & Francis Group and IGI Global. She is peer reviewer and TPC member in different international journals. She was the editor in CIPR 2020, CIPR2019, IEMIS 2020, CIIR 2021, IEMIS 2018 special issues in IJWLTT. She is the member of several technical functional bodies such as ACM, IEEE, ICFERP, MACUL, SDIWC, Internet Society, ICSES, ASR, AIDASCO, USERN, IRAN, and IAENG. She has published 3 patents. Dr. Soumi Dutta has delivered 15 Keynote talks in Different International Conferences. She has been awarded with Rashtriya Shiksha Ratna Award, InSc Research Education Excellence Award.



**Prof. Dr. Samina Rajper, Shah Abdul Latif University**

Prof. Dr. Samina Rajper works as Professor at Institute of Computer Science, Shah Abdul Latif University, Khairpur. Her research interest includes Human Computer Interaction, Context Aware and Smart Systems, E-learning, Machine Learning. She is also working as the Focal Person of Kamyab Jawaan Markaz and Anti Plagiarism Office SALU. She has organized several international conferences as Technical Program Committee member and organizer. She has served as a reviewer for Energy Conversion and Management (JCR Impact Factor 4.8), Journal of the Operational Research Society (Impact Factor 1.225), IEEE Transactions on Sustainable Energy (Impact Factor 3.7) and several HEC recognized journals. Several FYP and M.Phil./MS/PhD scholars are being supervised by her. She is also working as Co-PI in SHEC -2020 Project. Several Capacity Building Workshops and Awareness Seminars have organized by her.



**Prof. Dr. Aysh Alhroob, ISRA University, Jordan**

Prof. Dr Aysh Alhroob currently works as full Professor at the Department of Software Engineering, Isra University, Jordan. He has done his BSC and MSC from ICT Pakistan whereas his PhD is from University of Bradford, UK in Software Engineering. His expertise are in Data and Text Mining, Big Data analysis, Software Testing and Software Requirements.

## SESSION CO-CHAIR



### **Dr. Qasim Ali Arain, MUET, Jamshoro**

Dr. Qasim Ali did his B.E and M.E in Software Engineering from Mehran UET, Jamshoro and has been working in Mehran UET since 12 years. He completed his Ph.D. from Beijing University of posts and telecommunication in 2018. He is a certified CCNA, CCNP and Java professional. He was awarded the outstanding researcher award by ministry of Education People republic of China and the best PhD graduate award 2018 from Beijing University of posts and telecommunication China due to his outstanding performance in Ph.D. His research interests include but aren't limited to Vehicular Communication , Information security, Indoor positioning, location based services, SDN, Edge computing, 5G, Named Data Networks, Block Chain technology , Software testing and Quality assurance, Software Requirement Engineering and Crowded Source Software engineering.



### **Dr. Zahoor Hussain Shah, Indus University**

Dr. Zahoor Hussain Shah is working as an assistant professor and chairperson of computing department at Indus University. Dr. Zahoor has done MS in Networks and Telecommunication from Muhammad Ali Jinnah University, Karachi and PhD in the field of Information and Technology from University of Sindh. His research areas include Energy Management, Smart Environment, Smart system and Network Security. Dr. Zahoor has published number of research articles in well know national and international journals.



### **Dr. Arjumand Bano**

Arjumand Bano Soomro did her PhD from Malaysia in software Engineering and she has contributed greatly in the field of software engineering. Her research work is expanded over three decades in the form of number of research papers in renowned journals. Earlier she was working in IICT Jamshoro and currently she is working as research scholar in Saudi Arabia.



### **Farhat Naureen Memon**

She is currently working in Female Campus, University of Hafr Al Batin, KSA. Earlier she did her PhD degree in Bio-informatics from University of Essex, United Kingdom. Her thesis title is “Study of the effects caused by the G-Quadruplex Structures on high-throughput nucleic acid measurements”. Her research interests are Bioinformatics, Genomic and Transcriptomic data analysis, Microarray Data Analysis, Algorithm Designing and Graph Theory.



### **Dr. Arifa Bhutto**

She is working as assistant professor in Institute of Information and Communication Technology of University of Sindh. She completed her BSc (Hons) in 1996 and MSc in 1997 from University of Sindh. She completed her PhD from Aalborg University, Denmark in 2017. She has vast experience of research in Software Engineering with main focus on formal methods, UML modeling and software quality assurance.





**Dr. Syeda Hira Fatima Naqvi, University of Sindh**

Dr. Syeda Hira Fatima Naqvi is currently working as an assistant professor at the Institute of mathematics and Computer Science, University of Sindh, Jamshoro. Dr. Hira did her PhD from the University of Sindh. Her research area is related to Information Systems (Business Informatics) and Software Engineering.



**Dr. Muniba Memon, QUEST, Nawabshah**

I am currently working as Chairperson and Associate Professor in Computer Science & Software Engineering Department, Indus University, Pakistan. Besides IU, I have been working in many international institutes as lecturer and researcher that includes; IIUM - Malaysia, SDU - Denmark, QUEST - Pakistan. I have received an undergraduate degree (B.E) in Computer System Engineering from Mehran University of Engineering & Technology (MUET) - Pakistan. M.Sc in Robot System Engineering from University of Southern Denmark (SDU) - Denmark, and Ph.D. in Computer Science from International Islamic University Malaysia

(IIUM) - Malaysia.



**Dr. Pinian Khan Butt**

Dr. Pinian Khan Butt is currently working as an assistant professor at Sindh Agriculture University. He received his PhD degree from China and has published number of papers in international and national journals. His research area is related to image processing and artificial intelligence.

# **A Legitimate ML Framework for Monitoring & Detection of DDOS Attacks: Using Real Time Approach**

Ghulam Batool Mastoi , Qasim Ali , Gul Bano , Isma Farah

**Mehran University of Engineering Science and Technology, Jamshoro, Sindh, Pakistan**

## **ABSTRACT**

DDOS attacks have become a widespread problem on the internet these days. This research paper provides a framework for detecting DDOS attacks using a Real-time Approach and compares the accuracy, precision, recall, and F1 score of four frequently used algorithms (Nave Bayes, Decision Tree, Random Forest, and Random Tree). The mostly famous website (Amazon, Github and Ebay) were preferred for the attacks through tool. OWASP ZAP and Weka Tool has been used for the analysis. 800 samples were collected. The study found interesting remarks.

Keywords— Ddos Attack, MI Algorithms, Owsap Zap, Risk.

# **System Architecture for Internet of Things (IoT) Based Smart Agriculture Monitoring**

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## **ABSTRACT**

The Internet of Things (IoT) refers to a collection of billions of physical devices across the globe that are linked to the internet, and all are collecting and sharing data. The Internet of Things is making us smarter and more approachable thus merging the digital and physical universes. The major issues concerned with the field of agriculture are pestle and animal attacks on the crops, unawareness of weather conditions, manual irrigation system, and lack of monitoring and controlling of farm remotely. Therefore, the only solution to overcome these major problems is to develop IoT based system. It places a major role in first world country but countries such as Pakistan where agriculture is the backbone of an economy still practices old harvesting methods that result in low productions. The highlighting features of the proposed architecture include pest monitoring, temperature, and humidity sensing, soil moisture sensing, and the water pump is connected with Raspberry Pi3 through the relay. All the sensors are integrated with the Raspberry Pi3 to form the Wireless Sensor Network (WSN). The additional features of the proposed architecture are Global System for Mobile Communication (GSM) based remote controlling in case of emergency and the Virtual Network Computing (VNC) viewer where users can access the Raspberry Pi3 remotely from anywhere in the world. All the desired data and alerts reach the farmer by GSM or through Thing Speak in Graphical form and all the previous data is saved on Thing Speak cloud. This IoT-based proposed architecture is deployed on the farm, and it costs effective as well.

Keywords—IoT, Sensors, Wireless Sensor Networks, Remote Monitoring system

# **Digitization of National Institutions Process in Pakistan**

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## **ABSTRACT**

The process of digitizing libraries and museums has become a common practice in the 21st century due to the rapid technological development. The current research paper is written with a purpose to understand study and identify the digitization process across the globe with special reference to Pakistan. Describing the process of digitization and the modern digitization practices, this paper throws light on the popularity of digitization in the modern era. This research paper also explains in detail the digitization process in Pakistan and the efforts of the country in digitizing its institutes for gaining a wide range of audience. Reflecting on the digital Pakistan policy, this research paper analyses the role of developing regions of the world in the field of digitization. The current research paper will contribute to understanding the process of digitization in Pakistan and the need of digitization practice in the world.

**Keywords:** Digitization process, Pakistan digital policy, modern digitization practices, digitizing libraries and museums

# **Unsusceptible Agile development model in CoVID-19 era**

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## **ABSTRACT**

The industry is eagerly looking for smart software development models which can address complex projects, predefined tasks, close coordinated teamwork with excellent communication to get the fastest result in the form of software in this sly CoVID-19 pandemic. It is a project management model. The empirical process of Scrum is based on three main pillars which are Transparency, Inspection, and Adaption (TIA). Business fluctuates like CoVID-19 the developed processes will also fluctuates or amended with new business requirements. So, new scrum model will arrive like Scrumban, Evo, Nexus, LeSS, lean, etc. To meet our deliverable goals strong planning is required. This research explains scrum planning via its family for better software development and understanding. This model will also depicts how and where to jump from EVO to LeSS huge before the planning phase.

**Keywords:** Agile, scrum master, Scrum planning in EVO, Scrumban, NEXUS, LeSS, and DAD.

# **User Acceptance of Internet of Things in Higher Education Institutes of Pakistan**

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## **ABSTRACT**

Internet of Things (IoT) is one of the most cutting-edge technologies of current era which uses functionalities of the web connectivity and tangible digital devices to make it possible to communicate, share, and transfer data and information among people as well as physical devices. Given the array of benefits it offers, it is gaining an increasing attention in every field such as health, mobility and transport, and home management with no exception for the education sector. Nowadays, especially after the outbreak of COVID-19 pandemic, many of the Higher Education Institutes are shifting from their traditional classroom based education environment to the online education environment. As a result, they are faced with many challenges such as physical attendance, limited digital resources, old and not appropriate teaching methods, etc. In such circumstances, adoption of IoT is useful for the HEIs to enable the students and teachers in conducting teaching-learning activities smoothly and more efficiently in an online mode. In this regard, the current paper attempts to measure the user acceptance of IoT adoption in HEIs of a developing county; i.e. Pakistan. The paper initially proposes a conceptual framework of IoT adoption that is based on the constructs of Unified Theory of Acceptance and Use of Technology (UTAUT) is proposed herein. Subsequently, a survey-based research is conducted with students, teachers, and administrators of HEIs to assess their readiness to accept and adopt IoT in higher education. The data is collected through online questionnaire and is analyzed through SPSS and Smart PLS software. The results indicate that Technology awareness, IoT efficacy, Performance Expectancy, Price value trade-off, and Social Influence are important factors that collectively affect the user acceptance of IoT in higher education sector.

**Keywords:** Internet of Things, Higher education institutes, Smart education, Digitalization, Technology for education, Online education

# Smart shopping carts by Fitting alerts

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## **ABSTRACT**

Social media attracts humans by posting cognition-based advertisements. Users show interest mostly in the clothing area, what their consent about the product is the size of clothes? Mostly designer creates dresses as per general ethnicity, other are following free size dresses mostly undergarments, which is not following smart clothing strategy. What this study feels about the future of online clothing is poor? Is this any strategy that can save invested money over the internet? An intelligent strategy that can bring a smile to buyer and seller. This study is taking the initiative to solve this problem by combining deep learning and neural networks. Initially, this study request users to accept cookies, this is an intelligent agent or we agent or software installed on your browser as an app. Once you order something it establishes a connection with the shopping server and browses recommended cloths for the user by calculating or matching user fittings attributes and cloths attributes, like Chinese shoe size is 42 but here user wears 10 sizes, both sizes are same but attributes are defined for china from 10 to 45+, in contrary in our country shoe sizes, in general, are from 0-12. Here this study proofs an intelligent agent is necessary to bridge this attribute gap to save the online shopping industry. The project's purpose is to give a user idea and to predict which brand & size will be the best one or not for the customer by using data/input provided by the customers. Optimum result will be produced by the agent which compares user attributes with available attributes from the shopping cart, the name of this study is fitting alerts, and follows a deep learning algorithm.

Keywords: clothing shopping cart, deep learning, artificial intelligent agent, attribute comparison.

# **Students Perspective on Factors affecting FY-SDP: A case study of the BSCS program at the University of Sindh**

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**IMCS, University of Sindh, Jamshoro**

## **ABSTRACT**

The purpose of this research is to investigate the students' perspective on factors affecting their Final Year Software Development Project (FY-SDP) and management concerning the teamwork of final-year students working on their FY-SDP. It is one of the mandatory requirements for awarding a Bachelor's degree in Computer Science at the Institute of Computer Science the University of Sindh Jamshoro. This study defining attributes include Technical Skills, Communication Skills, Supervisor Cooperation and the impact of their software development project on their Professional development. Through Google Forms, research was carried out to collect the responses and feedback of teammates/students working on FY-SDP. In addition, the study revealed information about assigning jobs to team members, whether they are appointed based on their skills and members involved in software development projects which have direct or indirect effects on the success of software projects.

**Keywords:** Final Year Software Development Project (FY-SDP); Technical Skills; Supervisor Cooperation; Communication Skills; Impact of FY-SDP.



# **Fog Computing Based Recovery Model for Reliable E-Healthcare Services**

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## **ABSTRACT**

Fog computing is an architecture that extends traditionally centralized cloud computing functions to the edge and close to where data is generated from the Internet of Things (IoT) network, saving the cloud bandwidth and reducing the processing time required. Urgent data generated from Internet of Things (IoT) devices such as data on health intensive care, data on disaster detection or some critical business data need to be processed quickly to obtain real-time notification and then take appropriate action. However, it is necessary to ensure continuity of operation for these systems even in the event of a network failure, which is an issue not yet well addressed in the literature. In this regard, the purpose of this paper is to explore and evaluate the current techniques used in the context of fog computing for failure recovery and to propose a fog based recovery model using a replication technique to ensure the reliability of time-sensitive healthcare systems. The suggested design will be tested using a simulator.

Keywords—Fog Computing, Node Failure, Failure Recovery, Service Reliability, E-healthcare.

# **Novel Methodology for Efficient Detection of QRS Morphology for The Cardiac Arrhythmia Classification**

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## **ABSTRACT**

The abnormal conduction or disturbance in the cardiac activity is called cardiac arrhythmia except for sinus rhythm. Cardiac arrhythmias are imposing a huge burden on the healthcare environment due to the increasing ratio of mortality worldwide. According to the updated health data records compiled by the American Heart Association (AHA), the foremost reason for the mortality is heart disease is observed with 17.3 million yearly records. An electrocardiograph (ECG) is a non-invasive tool that has been frequently used to diagnose cardiac arrhythmia by a cardiac specialist. Nowadays, researchers are seeking interest to diagnose cardiac arrhythmia using computer-assisted methods, to detect cardiac arrhythmia. QRS morphology is considered as the main feature, as it has different variations due to the inter-patient variability issue and different types of cardiac arrhythmia. In literature, there is a lack of computer-assisted techniques which detect the exact location of QRS morphology. The inefficient detection of QRS morphology is results the biased classification of cardiac arrhythmia. In medical science, biased diagnosis of cardiac arrhythmia using any computerassisted methods can put the patient lives in danger. Furthermore, manual analysis of cardiac arrhythmia has various risks such as time-consuming and human error. Therefore, to saves the patient time and medical specialist effort, this research aims to contribute a novel methodology for the extraction of the QRS morphology feature (E-QRSM) to classify the Premature ventricular contraction (PVC) arrhythmia from ECG signals. The most critical and challenging task of the ECG signal analysis is to extract the exact morphology features which are relevant to the arrhythmia is quite challenging task. This research presents a new approach to E-QRSM methodology for the classification of PVC arrhythmia. QRS segments are considered as the main component of PVC arrhythmia, therefore these components use to feed the classifier. The experiment was conducted using the public benchmark dataset MIT-BIH arrhythmia to evaluate the performance of our proposed E-QRSM methodology. In the experimental analysis of the proposed methodology, EQRSM observed that this new algorithm produces an accurate and efficient real-time analysis of QRS related features with the conduction of abnormal rhythm of ECG signals.

**Keywords:** Cardiac arrhythmia, Biomedical Signal Processing, feature extraction, data mining, and machine learning

# **Architecture of POS Tagger in Sindhi Language**

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**Shah Abdul Latif University, Khairpur, Sindh, Pakistan**

## **ABSTRACT**

Sindhi is one of the oldest languages spoken and written in many parts of globe. In the language word segmentation, short vowel restoration and Parts of Speech (POS) tagging are the most challenging jobs for its natural language processing applications. Furthermore, it is complex by its features e.g: soft spaces in words, short vowels, complex and compound words etc. Considering its complexity, Parts of Speech (POS) tagging are difficult for machine learning. So, to overcome these ambiguities, architecture is proposed in this paper. There are eight parts of speech according to the structure of sentence. The parts of speech change their nature that human being easily understands but a machine (computer) does not do so. To resolve these issues some of rules are defined in this model which may help a machine to understand parts of speech tagging. It has three disparate phases to resolve the tagging problems in Sindhi and other languages as well. Tokenization is a tool for natural language processing for word segmentation, short vowel restoration for proper vocalization and tagging to understand relevant tag to current texts. If the parts of speech are tagged in the carpus, it removes the ambiguity. The English language has so many laws but the Sindhi language identify its functionality by the carpus. This architecture can help the community to identify the native structure of language. It is also beneficial to translatorof Sindhi Language, Web Portals, Sindhi Dictionaries, Text Summarization, Machine Translation, Question Answering, Information Extraction and Information Retrieval.

**Keywords:** Parts of speech tagging, tokenization, vowel restoration, Natural language processing.

# **E-Learners' Cognitive Skills Estimation Development by using Machine Learning Techniques**

Benish Zehra, Samina Rajper

## **ABSTRACT**

Our research is based on emergent fields of computer science, educational data mining and Learning Analytics. L.A is that field of research to collect, analyze, measure, and deliver data in processed form, after analytical approach to a final degree of analysis about the learners and their learning environment. Why we chose this domain? The reason is behind this is because its absorbed other fields and highly related to the other domains such as AA (Academic Analytics), EDM (Educational Data Mining) and ML (Machine Learning). We will focus the above fields in our research. We have divided our research in to two parts. In first part we will collect, analyze, and interpret by using Machine Learning-ML techniques, the data which came from various sources. From this data we will be able to estimate the cognitive skills through diagnosis assessment by using Artificial Neural Network. For our demonstration we will have to apply Machine Learning-ML methods. Second part of our research will be focused on cognitive skills enhancement by using gaming environment interaction.

Keywords—Artificial Intelligence, Artificial Neural Network, Cognitivedeterministic Model, Educational Data Mining, Learning Analytics, Machine Learning, Visual data mining.

# **Inclination of Computer Virus and Anti-Virus Techniques**

## **A Short Survey**

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### **ABSTRACT**

In today's world computer viruses are a big problem for everyone who uses computer. This survey report presents the general view about the development of computer viruses and defense mechanisms of anti-viruses to stop them. In order to prevent from the detector of anti-viruses, computer viruses regularly upgrading their codes. Anti-viruses programs uses several distinctive methods in inspecting, scanning, detecting malwares to deliver enough shelter for computer systems .We also presents a comparison table which shows the strengths and weaknesses of every detection methods and also evaluate their features . In the end we also give some future recommendations and conclusions.

Keywords— Encryption, Virus, Anti-virus, trend, defense mechanism, generations.

# **Internet of Everything: Transformation of Transport Infrastructure of Pakistan**

Faisal Imran, Kuntpong Woraratpanya, Somkiat Wangsiripitak, Ufaque Shaikh, Ahmed Mateen

## **ABSTRACT**

Pakistan is the 5th country with the most population in the world. With the daily explosion of population and enhancement of mobility, the gridlock of traffic is often seen on the road. The gridlock of traffic reduces the efficiency of daily routine work by putting pressure on account of more fuel consumption and wastage of time. This is caused by signal failures or unprofessional ways of traffic management. Traffic management is the main attention to solve this problem. Many solutions were provided from which the techniques like video data analysis, wireless sensor network, infrared sensors, etc. that somehow solves the problem but it is too costly and time-consuming. The study has the objective to reduce traffic gridlock with the help of Internet of Everything Technology (IOE). IOE is the pattern of sense and response. Object detecting sensors can be used at traffic signals, direction boards, and streetlights to detect the presence of vehicles. RFID can be used to read the unique code from RFID tags attached at vehicles to detect the vehicle type. The data will be stored in the database using a network of connections. The data in graphical form can be perceived by Traffic Inspectors to judge the more gridlocked area and flow of traffic. In case of infringement of traffic rules, a fine will be charged. The engagement of this technique will be reliable, effective, and intelligible.

Keywords— Intelligent Traffic System, Internet of Everything, Connectedness, Smart City, Traffic Signal Management.

# **The Link-Prediction:-An inter-connectivity problem in Social Networks**

Jawad Hussain Awan, Asad Ali Shaikh, Kamran Dahri, Faisal Akbar Khaskeli and Farman Pirzado

## **ABSTRACT**

This paper gives an overview about the structure of social networks and discusses the emerging problem such as link prediction. Researchers have chosen five networks and tried to predict the links amongst nodes. In addition, both have defined and given an experimental study of computational problem, also given a snapshot. That snapshot comprises time (t), future time (t') during the interval time added to the network. In addition, the problem of link prediction may be at what extent level for modeling. Main aim of researchers in conducting this research is to define accurate and precise link predictions for future network nodes.

Keywords— Social networks, Link prediction, network nodes, trend, defense mechanism, generations.

# **Geo Fencing Advanced Way to Locate Terrorists**

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## **ABSTRACT**

Mobile phones are a very important invention of the 21<sup>st</sup> century which has changed the lives of millions of users world-wide by connecting people across the globe. Although, this device is very beneficial for its users yet some criminal elements have taken the negative advantage of it by using it for various criminal activities. For this purpose, an advanced system of geo fencing is developed by the concerned authorities in order to locate and curb these criminal activities as early as possible. This research paper deals with the brief overview of the process of geo fencing. It also throws light on data analysis and discusses the ways of identifying and arresting the criminals.

Keywords— Geo fencing, mobile phones, criminal identification, defense mechanism, generations.





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