Professor ASIFULLAH KHAN (PoP)

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2007 – 2009	Post-Doc (Machine Learning), GIST, Gwangju, South Korea	
2003 – 2006	Ph.D. (Computer Systems Engineering)	GIK Institute, Topi, Khyber Pakhtunkhwa, Pakistan
2001 – 2003	M.S. (Computer Systems Engineering)	GIK Institute, Topi, Khyber Pakhtunkhwa, Pakistan
1996 –1998	M.S. (Nuclear Engineering)	PIEAS, Islamabad, Pakistan
1994 –1996	M.Sc. (Physics; Gold-Medalist)	UOP, Khyber Pakhtunkhwa, Pakistan
1992 –1994	B.Sc.	Islamia College, Khyber Pakhtunkhwa, Pakistan

Professional experience

Oct 1998 – June 2006	Senior Scientist (Asst. Prof.) :	***PINSTECH, Islamabad, Pakistan***
June 2006-Dec 2008	***Senior Scientist (Asst. Prof.) :***	***PIEAS, Islamabad, Pakistan***
Dec 2008- Nov 2016	Principal Scientist (Associate Prof.) :	***PIEAS, Islamabad, Pakistan***
Nov 2016-present	Professor, Head PIEAS AI Centre (PAIC), and Director CMS	***PIEAS, Islamabad, Pakistan***

Courses Taught and Research Areas

- Deep Neural Networks — Pattern Recognition — Artificial Intelligence
- Machine Learning — Transformers and Deep Convolutional Neural Networks
- Image Processing — Computational Intelligence — Machine Learning in Cyber Security

Distinctions And Awards

- Presidential Pride of Performance Award, in the field of computer Science, 2018.
- Enlisted in the World's Top 2% Scientists by Stanford University (both in Career-Long and in years 2020, 2021, 2022, 2024, and 2025).
- Youm-e-Takbir Performance Gold Medal by PAEC, 28 May, 2017.
- Research Productivity Award (RPA) from Pakistan Council for Science and Technology (PCST), in year 2011-12, 2012-13(Category A), 2013-2014(Category B), 2014-15(Category A), 2015-16 (Category C), and 2016-17 (Category C).
- HEC Certificate for or International Research Influence (in Reference to Top 2% Scientist, March 09, 2026).
- Best University Teachers Award for the Year 2011 by HEC, Pakistan.
- PAS-COMSTECH Prize 2011 in Computer Science & I.T by PAS, Pakistan.
- Top Productive Computer Scientist in Pakistan in Year 2015 by Pakistan Council for Science and Technology (PCST).
- HEC's Outstanding Research Paper Award 2017 ("Intelligent and robust prediction of short-term wind power using genetic programming-based ensemble of neural networks", A Zameer, J Arshad, Asifullah Khan, M Asif Zahoor Raja Energy conversion and management 134, 361-372, 2017)
- HEC's Outstanding Research Paper Award 2013/2014 (WRF-TMH: predicting transmembrane helix by fusing composition index and physicochemical properties of amino acids.
- HEC's Outstanding Research Paper Award 2013/2014 (IDM-PhyChm-Ens: Intelligent decision-making ensemble methodology for classification of human breast cancer using physicochemical properties of amino acids).
- HEC's Outstanding Research Awards 2010-2011.
- Top Productive Computer Scientist in Pakistan in Year 2014 by Pakistan Council for Science and Technology (PCST).
- Top Productive Scientist in PIEAS University in Year 2014 by Pakistan Council for Science and Technology (PCST).
- Top Productive Computer Scientist in Pakistan in Year 2013 by Pakistan Council for Science and Technology (PCST).
- Top Productive Scientist in PIEAS University in Year 2013 by Pakistan Council for Science and Technology (PCST).
- Top scorer in Worldwide competition; Prediction of the proliferation score based on mitosis counting, 2018.
- HEC Approved PhD Supervisor.
- Gold Medalist in M.Sc. Physics, University of Peshawar.
- Third Position in MS Computer Systems Engineering, 2003, GIK Institute, Pakistan.
- Best Research Paper Award at IEEE ICET-2013 conference; "Particle Swarm Optimization based Object Tracking using HOG Features".
- Best Research Paper Award at IEEE ICET-2010 conference; Membrane Protein Prediction Using Wavelet Decomposition and Pseudo Amino Acid based Feature Extraction

- Second position in Poster Paper; "Decentralized Drone Swarm Navigation in Dynamic Environments: Island Policy Optimization with Hybrid Reward Strategies", at 50th INSC Activity I: Artificial intelligence and Machine Learning, June 2025.

- Award of Post-Doc Scholarship under Brain Korea Program, South Korea.
- Award of HEC indigenous PhD scholarship.
- Award of Fellowship M. S. Nuclear Engineering from PIEAS.
- Best MS Thesis Project Supervised in DCIS, PIEAS in 2023.
- Best BS Thesis Project Supervised in DCIS, PIEAS in 2011.
- Best MS Thesis Project Supervised in DEE, PIEAS in 2012.
- Best MS Thesis Project Supervised in DEE, PIEAS in 2013.
- Best MS Thesis Project Supervised in DCIS, PIEAS, 2022.

International Journal Publications: *More than 200 Publications with about 160 Int. Journal Publications having about 15,500 citations (details given below).*

International Collaborations: Dr. Khan maintains strong collaborative relationships with numerous international institutions, such as **GIST, CERN, the University of Warwick, Catholic University Daegu, Korea National University of Transportation, City University London, and Universiti Tunku Abdul Rahman.**
A significant part of his current work involves using Machine Learning and Artificial Intelligence to enhance the **ALICE experiment at CERN**. Dr. Khan is specifically applying **Deep Neural Networks, like Convolutional Neural Networks (CNNs), Vision Transformers, and Graph Neural Networks (GNNs)** for various applications.

Books:

- Khan, Asifullah, et al., ***Venturing into the Jungle Depths and Conquering Neural Networks Wilderness***, e-Book 1st ed., ASIN: B0D8FF7B4S, Kindle Amazon, 28 June 2024.
- Khan, Asifullah, et al. ***A Cooking Quest to Master Machine Learning***, e-Book 1st ed., Kindle Amazon, 2025.

Courses Taught: Deep Neural Networks, Pattern Recognition, Digital Image Processing, Computational Intelligence, Machine Learning, Artificial Intelligence, Evolutionary Computing, Machine Learning in Cyber Security, Digital Watermarking, Compiler Construction, Computing Fundamentals, Discrete Math, and Computer Architecture

Foreign and local Research Grants

1. **NILOP-PIEAS Emerging Technologies Centre,** Team-Lead of AI (3 Billion Rs)
2. **Plan to Initiate Quantum and AI Technologies at PIEAS,**
   R&D Board. Role= Team Lead of AI Technologies, Amount=1.5 Billion Rs.
3. **AI Based Vulnerability Assessment,**
   RAC project; Role: Co-PI, amount= 2.5 Million Rs.
4. **Digital Twin for Teaching AI and Computer Vision,** R&D Board. Role= Co-PI(20 Mn Rs)
5. **Self-Supervised Network Anomaly Detector, 073/RAC-XI/PIEAS/2024;** RAC project
6. **Deep Learning based Pose Estimation in Surveillance Cameras**, R&D Board. Role= PI; (10 Mn Rs)
7. **Deep Fake Multi-Modal Approach using Blood Vein Viewer Technology**, R&D Board. Role= Co-PI; (10 Mn Rs)
8. **Drone Swarm Control Using Deeping Learning**
   R&D Board, FY 2021, PAEC
   Project No. 237, *Role: Principle Investigator; Amount=0.4 million RS.*
9. **Development of an Efficient Churn Prediction System for Telecom Industry Using Computational Intelligence**
   Period: 2016 ~ 2018
   Project number: NRPU-3408
   Sponsor: HEC
   Role: Principle Investigator; Amount: 1.84 million Rs.
10. **GPU Enabled Implementation of Deep Neural Networks, HEC Institutional Strengthening, 2016; Rs.944,656/-**
    HEC(FD)/2016/187

Sponsor: HEC
Role: Principle Investigator; Amount: 0.94 million Rs.

11. **Development of an intelligent and high throughput Prediction System for the classification of Membrane Proteins.**
Period: 2011.05.20 ~ 2012.11.19
Project number: 10-122 RG/ITC/AS-C UNESCO FR: 3240246306
Sponsor: TWAS-COMSTECH Joint Research Grants Program, 2011
Role: Principle Investigator; Amount: 0.2 million Rs.
12. **Development of a Reversible Watermarking System for the Security of Medical Imagery in Hospitals**
Period: 2011.05.24 ~ 2014.05.23
Project number: 20-1624/R&D/10
Sponsor : HEC's National Research Grant Proposal for Universities, 2011
Role: Principle Investigator; Amount:1.86 million Rs.
13. **Up gradation of the Pattern Recognition Lab: Enhancing the Computational Facilities for Simulation Studies, PIEAS, Islamabad,**
Sponsor: HEC; No.2-1/Lab(PIEAS)/Acad-R/HEC/2012/1948, 2012.
Role: Principle Investigator; mount:0.87 million Rs.
14. **Development of an Efficient Watermarking System for Information Hiding and Protection of DNA Sequences,** ICT R&D as ICT-Related Research and Development Grant.

Project number: ICTRDF/TR&D/2012/62-DEWS; Period: 2013 ~ 2017.
Role: Principle Investigator; Amount:5.3 million Rs.
15. **Protection of DNA sequences through Particle Swarm Optimization based Watermarking**

Period: 2013 ~ 2014
Project number: 12-216 RG/ITC/AS-C; UNESCO FR: 3240270865
Sponsor : TWAS-COMSTECH Joint Research Grants Program, 2013
Role: Principle Investigator; Amount: 0.4 million Rs.
16. **Smart Prediction of the Malaria Parasite Mitochondria, Co-PI, Grant number: CU- 20121374, 2013,** Funded by: Catholic University of Daegu, Rep. Korea.

17. **An Optimization Technique for Shape Recovery from Image Focus**
Period: 2008.7.1 ~ 2009.6.30
Project number : D00404
Sponsor : Korea Research Foundation, South Korea
Role : Foreign collaborator
18. **An accurate 3-D shape recovery technique for microscopic object**
Period: 2007.9.1 ~ 2009.8.31
Project number : R01-2007-000-20227-0
Sponsor : Korea Science and Engineering Foundation, South Korea
Role : Post Doc Researcher
19. **Bio-optics image processing and DB search engine development**
Period: 2008.8.1 ~ 2010.12.31
Project number : K0164H
Sponsor : Bio Imaging Research Center at GIST, South Korea
Role: Post Doc Researcher.
20. **Software Reliability Growth Model: Genetic Programming-based Approach,** 070/RAC-IX/PIEAS/2022

21. **Deep Reinforcement Learning for Functional Software Testing,** 071/RAC-IX/PIEAS/2022

22. **Upgrading of the triple axis neutron spectrometer TKSN-400 installed at Pakistan research reactor-1,** Bashir, J; Khan, R.T.A.; Khan, M.M.; Iqbal, N.; Waheed, A.; Hussain, A.; Khan, A.U.; Zaman, Q. , 2000.

23. The **IAEA TC project PAK/4/044 , PINSTECH**, The IAEA TC project PAK/4/044. A small angle neutron scattering instrument, designed, developed and installed at beam tube No. 5 at PARR-1; completed in 2003.

On the Panel of Reviewers of International Journals

1. Applied Energy (Elsevier Science)
2. Nature Communications Biology.
3. Nature Scientific Reports
4. Pattern Recognition (Elsevier Science)
5. Energy Reports
6. Energy Systems
7. IET Electronics Letters
8. Amino Acids (Springer-Verlag)
9. Pattern Recognition (Elsevier Science)
10. Journal of Proteomics (Elsevier Science)
11. Bioinformatics (Oxford Press)
12. Information Sciences (Elsevier Science)
13. ACM Transactions on Multimedia Computing
14. BMC Bioinformatics (BioMed Central)
15. IEEE Transactions on Artificial Intelligence
16. IEEE Transactions on Image Processing
17. IEEE Transactions on Medical Imaging
18. IEEE Transactions on Evolutionary Computing
19. IEEE/ACM Transactions on Computational Biology and Bioinformatics
20. IEEE Transactions on Cybernetics
21. IEEE Transactions on Information Forensics and Security.
22. IEEE Transactions on Evolutionary Computing
23. IEEE Transactions on Knowledge and Data Engineering
24. IEEE Transactions on NanoBioScience
25. IEEE Transactions on Neural Networks and Learning Systems
26. IEEE Transactions on Industrial Informatics
27. IEEE Transactions on Network and Service Management
28. IEEE Computational Intelligence Magazine
29. IEEE Access
30. Journal of Industrial and Engineering Chemistry (Elsevier Science)
31. Applied Soft Computing (Elsevier Science)
32. Analytical Biochemistry (Elsevier Science)
33. Computational Materials Science (Elsevier Science)
34. Signal Processing (Elsevier Science)
35. Applied Optics (The Optical Society of America)
36. International Journal of Computational Intelligence Research
37. PLOS ONE
38. Microscopy Research and Technique (Wiley InterScience)
39. Computers & Electrical Engineering (Elsevier Science)
40. Journal of The Franklin Institute (Elsevier Science)
41. Knowledge and Information Systems (KAIS) (Springer-Verlag)
42. International Journal of the Physical Sciences (Academic Journals)
43. IET Generation, Transmission & Distribution (IET)
44. Current Bioinformatics (Bentham Science Publishers)
45. Digital Signal Processing (Elsevier Science)
46. Image and Vision Computing (Elsevier Science)
47. Optical Engineering (SPIE)
48. Entropy, MDPI Publishing.
49. Computer Methods and Programs in Biomedicine (Elsevier Science)
50. Medical & Biological Engineering & Computing, (Springer-Verlag)
51. Multimedia Tools and Applications (Springer-Verlag).
52. Chemometrics and Intelligent Laboratory Systems (Elsevier Science)
53. Expert Systems with Applications (Elsevier Science)
54. Ultrasonics (Elsevier Science)
55. Advances in Electronics (Hindawi Publishing)
56. Journal of Electronic Imaging, SPIE
57. Journal of Visual Communication and Image Representation, (Elsevier Science)
58. Neurocomputing (Elsevier Science)
59. Measurement (Elsevier Science)
60. Biomedical Optics Express
61. Interdisciplinary Sciences: Computational Life Sciences
62. International Journal of Pattern Recognition and Artificial Intelligence
63. Engineering Applications for Artificial Intelligence
64. Imaging Science Journal
65. Waves in Random and Complex Media
66. Applied Intelligence
67. Cybernetics and Systems
68. Optics Continuum
69. The Computer Journal

70. Applied Sciences, MDPI
71. Cancer Management and Research
72. The Journal of Supercomputing, Springer
73. Chemosphere, Elsevier Science
74. Journal of Visual Communication and Image Representation
75. International Immunopharmacology
76. Journal of Autonomous Intelligence
77. Computational and Structural Biotechnology Journal
78. International Journal of Biological Macromolecules, Elsevier Sciences
79. Journal of King Saud University - Computer and Information Sciences
80. Gene, Elsevier Science
81. Nanostructures & Nano-Objects, Elsevier Science
82. Automation in Construction, Elsevier Science
83. WIREs Data Mining and Knowledge Discovery
84. Cluster Computing, Springer
85. Intelligence-Based Medicine

Machine Learning and Computer Vision based Applied Projects:

1. Autogen Agent Conversations: Designed and tested conversational agents with Autogen for dynamic, context-aware interactions in advanced AI systems, 2024
2. Fashion Pattern Generation (DCGAN): Developed a design pattern generator to create new patterns based on image or text inputs using advanced neural networks, 2024.
3. Sentiment Analysis using BERT, 2024.
4. Yolo Object detection, 2024.
5. Malware Classification Using KNN and SVM, 2024.
6. Vision Transformer for Transfer Learning, 2024.
7. Multi-Layer Perceptron for Malware Classification, 2024.
8. Text-to-Video Generation (LLaMA, GANs): Designed a pipeline that generates videos from text prompts, leveraging generative adversarial networks and LLMs, 2023.
9. Discrete Math Chatbot (BERT, NLP): Built and deployed web and mobile applications for an AI-driven chatbot to assist students with discrete mathematics, 2022.

Member, Review Committee, Developments

- Organizing the Inauguration of Center for Mathematical Sciences (CMS), PIEAS.
- Organizing the Inauguration of CMS PIEAS by Federal Minister Ahsan Iqbal, 18 Nov, 2025.
- Presenting CMS Progress as Director CMS at Steering Committee, HEC, 2026.
- Head PIEAS AI Centre (PAIC), PIEAS (2020-2024).
- Director Center for Mathematical Sciences (CMS), PIEAS.
- Reviewed more than 40 PhD Thesis and numerous MS Thesis
- Organizing the International Workshop “Recent Advances in Artificial Intelligence” workshop at PIEAS, 5-16 August, 2024.
- Instructor of the two-week workshop “AI Applications in Cyber Security”, 19-30 August, 2024, PIEAS.
- Technical Committee member of IBCAST 2024.
- Presenting and defending MS AI Curriculum and Program at DCIS Faculty, BoS, BoF and Academic Committee.
- Contributed in PIEAS restructuring and focusing on AI, Quantum Computing, and Cyber Security.
- MS AI Fellowships approval for PIEAS
- Member Technical Committee, International Summer College, Nathia Gali, (INSC).
- Member of PolyU Academy for Interdisciplinary Research, The Hong Kong Polytechnic University.
- Member PhD Experts Committee/Working Groups
- Attended BOG Meeting PIEAS, 14 Oct 2023.
- Contributed to developing and improving the “10 Years AI Vision” for AITeC
- Member Selection Board, CS, Air University
- AI-TCC member, Strat Commissions.
- Committee Member of IBCAST 2022 and 2023.
- Initiation and Completion of MOUs between PIEAS and Islamia University College Peshawar, PIEAS and Bahria University, and between PIEAS and AITeC
- Steering Committee of RAEE&CS International Conference
- MS AI Degree Proposal Presented in DCIS Faculty Meeting, 12 July 2023.
- AI Stall Participation in AI Exhibition in Healthcare, COMSTECH, November 24-25, 2020.
- Basic Management Course, PIEAS

- Senior Management Course (SOMC-37) at PIEAS, id number: 93, 18 Sep-08 Nov 2023.
- Establishment of AITeC and "PIEAS AI center (PAIC)"
- Establishment of CIPMA (Cyber Security), Data Science, and Digital Disruptive Labs in DCIS.
- In Expert Pool of AITeC and AI based Cyber Security
- Assisting in Establishment of "PIEAS Center for Cyber Security (PCCS)"
- Approval and initiation of MS "Cyber Security" programs from PIEAS statuary bodies.
- Acquiring Mini Supercomputer, DGX, NVidia
- BOS Member of COMSATS, and AJK University, Muzaffarabad.
- Organizing AI Webinar "AI for Healthcare and Autonomous Systems", Sep 03, 2020.
- Initiation of Cyber Security Fellowship and Inter-Departmental MS and PhD program at DCIS, PIEAS.
- Starting of NESCOM fellowships for both of our BS and MS programs
- Initiating and Establishing DCIS Contribution in RAEE&CS International Conference.
- Organizing 2nd "International Symposium on Advances in Computer and Information Sciences" 24-Oct-17 to 26-Oct-17, in DCIS, PIEAS.
- Development of Deep Learning Lab and Providing facility of Mini-Supercomputer DGX-1 at, PIEAS
- Development of Data Science lab as HEAD DCIS
- Accreditation of BS (CIS) for batches 2014, 2015, & 2016.
- Establishment of SIPMA Lab at DCIS, PIEAS under National Center for Cyber Security in C-block from HEC/Planning commission, 2018.
- Approval of a TDF, Institutional Strengthening, and two NRPU grants as Head DCIS
- Strengthening faculty of DCIS; Joining of a young Faculty Member in DCIS; Mr. Waleed (MS Systems Fellow), Mr. Irfan Hameed, and Mr. Mazhar Hussnain.
- Strengthening of Research Grants; Approval of a TDF, Institutional Strengthening, and two NRPU grants as Head DCIS
- MS cyber-Security program has started, and the first Fellows of DCIS have arrived.
- Approval of a big prefab lab for DCIS Workshops, Classes, MS & BS Projects, etc.
- Approval of funds to make Applied Electronics lab as a Multi-Lab (Electronics, DLD, Operating Systems, database, Networking) and Shifting of ASD staff to other places so that Applied Electronics Lab has more space and decorum.
- The Establishment of SIPMA Lab at DCIS, PIEAS under National Center for Cyber Security in C-block.
- Attaining W- category for BS program of DCIS. And NOC for both MS computer Science and MS cyber-Security from HEC.
- Passing out of DCIS BS batch after quite a few years.
- Starting of a series of Cyber Security Workshops at strategic commission level (about 4 workshops per year; two have already been conducted).
- Strengthening of PhD program of DCIS; Total PhD graduates of DCIS are now 31.
- Reviewer of 85 International Journals.
- Chaired Session at IBCAST, Jan 2020, NCP, Islamabad.
- Chaired Session at IEEE INMIC NUCES FAST, December 2019, Islamabad.
- I invited talk at IEEE ICET 2019, NUCES FAST, Peshawar.
- Member of the international society of Optics and Photonics, SPIE
- Enhancing Collaboration with other strategic organizations Through MS Thesis Projects; Restructuring of MS "Computer Science" Syllabus at PIEAS
- Development of Pattern Recognition Lab at DCIS, PIEAS
- Introduction of new MS level Courses
- Increasing number of PhD scholars at DCIS, PIEAS
- Associate Editor, The Nucleus Journal.
- Developed Proposal for AI Research Center at PIEAS.
- Revision of BS Syllabus (Computer Science at PIEAS).
- Approval of "MS Cyber Security" program of DCIS
- Starting of Cyber Security MS Fellowships at PIEAS.
- Development of a Computer Cluster at DCIS for MS and PhD Students.
- Starting MOS Certiport Training at PIEAS.
- Presenting and Defending DCIS related issues in BOS, BOF, CGSR, and Academic Committees of PIEAS
- Convener of SAR PhD for DCIS.
- SAR PhD evaluator for PIEAS.
- PhD Progress report Evaluator for PAEC
- Focal Person of PhD Program Assessment Team, DCIS, PIEAS
- Board of Faculty, PIEAS, 2008-todate.
- Board of Studies, Department of Computer and Information Sciences, PIEAS.
- Hostels Warden at PIEAS in 2006-2007.
- On the Panel of PhD of Examiners of COMSATS, Islamabad.

- On the Panel of PhD of Examiners of NU-FAST, Islamabad.
- Genetic and Evolutionary Computation Conference, GECCO.
- European Conference on Genetic Programming, EUROGP.
- IEEE International Multi-topic Conference, INMIC.
- International Conference on Frontiers of Information Technology -- FIT.
- International Conference on Information Sciences, Signal Processing and their Applications
- International Conference on Emerging Technologies, IEEE ICET.
- IEEE/ASME Int. Conf. on Mechatronic and Embedded Sys. and Applications, MESA.
- PAKDD workshop on Biologically Inspired Techniques for Data Mining (BDM'11).
- IEEE International Conference on Emerging Technologies, Islamabad (ICET 2013).

Supervision of PhD students

Supervised:

Imran Usman	Digital Watermarking Using Machine Learning Approaches (**completed in 2010**)
Rafi Ullah	Digital watermarking for image authentication and recovery (**completed in 2010**)
Maqsood Hayat	Prediction of membrane proteins using machine learning approach (**completed in 2012**)
Zia-ur-Rehman	Classification of G Protein Coupled Receptors (**completed in 2013**)
Sana Ambreen	Study of Intelligent Reversible Watermarking (**completed in 2013**)
Muhammad Tahir	Protein Subcellular Classification using Machine Learning Approaches (**completed in 2014**)
Khurram Jawad	Multimedia Watermarking Using Intelligent Techniques (**completed in 2015**)
Adnan Idris	Customer Churn prediction using Computational Intelligence (**completed in 2015**)
Ayesha Siddiqa	Reversible Watermarking based on Histogram Shifting and Error Expansion (completed in June 2016)
Summaiya Munib	Study of Watermarking Approaches for Image and Text based Applications (completed in Nov 2017)
Iqbal Murtaza	Human Detection and Activity Recognition in Videos (completed in Dec 2017)
Noorul Wahab	Histopathology Images based Breast Cancer Analysis using Deep Neural Networks (14 Sep 2018)
Naveed Chouhan	Deep Neural Network based classification using Highway Network Architecture (10 Nov 2021)
Aqsa Saeed	Transfer Learning in Deep Neural Networks (completed on 19 Nov 2019)
Um-e-Zahoora	Intrusion Detection using Deep Neural Networks (08 Sep 2022)
Saddam Hussain	Automatic Medical Image Segmentation using MRI and Deep CNN (2022)
Zunaira Rauf	Cancer Analysis of Histopathological Whole Slide Images using Deep Learning (20-12-2023)
Sibghatullah Marwat	Deep Learning Based Chatbot Development
Nauman Ahmed	Predictive Crime Analysis Using Machine Learning
Mubashir	Mukti-Modal and Deep Learning based Malware Analysis
Muzaffar Khan	Drone Detection Using Vision based Camera and Deep CNN

Co-supervised:

Naeem Akhter:	Visual Tracking of Mechanically Thrown Planer Objects, Institute of Computer Technology, Vienna University of Technology, Austria, 2012. (completed)
Mehdi Hasan	Study of Computer Aided Diagnostic for Medical Image Segmentation (completed in 2015)
Muhammad Safdar	Intelligent Decision-Making Ensemble Classification System for Breast Cancer Prediction (comp. in 2015)
Saima Rathore	Automatic Segmentation and Classification of Colon Biopsy Images (completed in 2015)

Anabia Sohail	Breast Cancer Analysis Using Histopathology Images and Deep Convolutional Neural Networks (completed on 06 Aug 2021)
Ammara Mehmood	Novel Applications of Metaheuristics for Parameter Estimation in Nonlinear Systems (completed in 2020)
Anum Mushtaq	Intelligent Traffic Flow Management of Autonomous Vehicle systems (completed; 14 Oct 2022)
Mumtaz Mirza	Brain Tumor Analysis using Deep Neural Networks (completed 23rd Feb 2023)
M. Asam	Malware Analysis using Deep Learning Techniques (completed; August 29, 2022)
Najm-us-Saher	Drone Swarm Navigation using Deep Reinforcement Learning
Earum Mushtaq	Deep Learning based Intrusion Detection System (completed; August 02, 2023)
Rehan Zubair	Critical Heat Flux prediction using Deep Neural Networks (completed; 23 July 2024)
Faiza Babar	Novel Malware Identification using Few-Shot learning (09 May 2025)
Umm-e-Hani	Malware Identification Using Few Shot Learning and Deep Neural Networks, (completed 19 Sep 2025)
Sanaullah Khan	Machine Learning based Identification & Evaluation of Pathogens in Raw Cow Milk
Shakirullah	Deep Learning-Based Range-Resolved LiDAR Systems for Remote Sensing

Invited Talks

1. Talk at KoreaTech, "Navigating AI Advancements and its Ethical Landscape" Jan 22, 2026.
2. Talk at NUST Baluchistan, "AI Advancements, its Ethical Landscape, and Project Grants" April 08, 2026.
3. Talk at SOMC45, "AI Advancements, its Applications Management, Governance, and Ethical Issues" April 13, 2026.
4. Four Talks at KNUT, Cheonan, Jan 28-29, 2026.
5. Presenting Progress Report of CMS at Steering Committee Meeting of CMS, 04 Nov 2025
6. PAIC Activities and the Four AI Labs: A Brief Talk given to CERN Team, 26th August 2025, CMS, PIEAS.
7. Advancing AI: Deep Learning at PIEAS, UBIT (Computer Science Department), Karachi University, Feb 24, 2025.
8. AI Revolution: Upscaling Management, Elevating Governance, and Ensuring Ethical Implementation, SOMC 43, 21 August, PIEAS, 2025.
9. AI Applications and Trends in in Process Engineering (16–17 July 2025) at PINSTECH, Nilore Islamabad
10. Artificial Intelligence: Innovations and Applications, Rawalpindi Women University, 21 May 2025.
11. AI Innovations, Applications and Ethical Cross Road with relevance to Social Sciences, NDU, Islamabad, 21 May 2025.
12. Navigating AI Advancements and its Ethical Landscape, Orient AI, PIEAS, November 14, 2024.
13. Exploring the Frontiers of AI, International Conference on Computational Intelligent Systems (ICCIS 2024), Kohat University of Science and Technology, December 03, 2024.
14. Harnessing AI for Symbiotic Nuclear Power: Autoencoders, GANs, CNNs, and Transformers, 11th International Symposium on Symbiotic Nuclear Power (ISSNP): AI Application in Nuclear Systems, 22 Sep-24Sep, Harbin, China, 2024
15. "Pose Estimation using CNN and Vision Transformers", ICEF 2024, Mongolia, 22 August 2024.
16. "PIEAS AI Center and its Activities ", CERN OpenAI, CMS, and ATLAS Teams, February 15th, 2024.
17. "Unlocking the AI Revolution: Exploring the Ascendance of ChatGPT and Its Applications ", ROMES Seminar Series, 20 December 2023, PIEAS.
18. The AI Revolution: Applications that are Changing Our Lives, Orient AI, PIEAS, 15 Nov 2023
19. PIEAS and Its AI related Activities, Online Talk to KU Leuven, eMedia research lab at Group T, Belgium (Prof. Bart Vanrumste), 24 Nov 2023.
20. Deep Convolutional Neural Network (CNN) and Its Applications, CENTech, NESCOM, August 16, 2023
21. Advancements and Applications of Deep Convolutional Neural Networks in Medical Image Analysis, ICEE-CCA 2023, TASHKENT, UZBEKISTAN.
22. MaxVit-Unet: Multi-Axis Attention for Medical Image Segmentation, Int. Conference on Electrical Facilities and information technologies, ICEF 2023, Almaty University of Power Engineering and Telecommunications, Kazakhstan, August 22, 2023.
23. Artificial Intelligence and Its Applications in Medical Image Analysis, Islamic International University, May 03, 2023.
24. AI and Its Applications, PIEAS-NESCOM Research Collaboration Meeting, 21 June 2023.
25. Artificial Intelligence and Its Applications, NILOP, March 2023.
26. Strategy Execution, SOMC-37, 23 October 2023.
27. Creative problem-Solving Techniques for Innovation, 12 October 2023.
28. Scientific Writing and Research Methodology, PCEYF-II Activity, PIEAS, 26 January 2023.
29. Basics of Technical Paper Write-up, Air University, Islamabad, 21 December 2022.
30. Deep CNN and Its applications, INMIC 2022, NU-FAST, Islamabad, October 2022.
31. Deep Channel Boosted CNN and Its applications in Medical Image Analysis, International Conference on Electrical Facilities and Informational Technologies, 12 August, ICEF 2022, TURIN POLYTECHNIC UNIVERSITY IN TASHKENT, Uzbekistan.

32. Deep CNN and Its applications in Medical Image Analysis, Webinar -Artificial Intelligence in Biomedical Research and Education, 27 July 2022, UTAR, Malaysia.
33. Machine Learning and Its recent Applications, 5th HPC workshop, PINSTECH, 06 July 2022.
34. Deep Learning and Its Applications in Cyber Security, Tri Services/SPD Cyber Security Seminar at IST, 21 December 2021.
35. Deep Learning Based Medical Image Analysis, International Workshop on Emerging in Software Development & Social Computing (Theme: Artificial Intelligence from Computing Perspective), Sep 02, 2021, NUML, Islamabad.
36. Chaired Session at IBCAST, Jan 2020, NCP, Islamabad.
37. Chaired Session at IEEE INMIC NUCES FAST, December 2019, Islamabad.
38. I invited talk at IEEE ICET 2019, NUCES FAST, Peshawar.
39. Chaired Session at ICET, Dec 27, 2017, HEC, Islamabad; Signal, Speech Processing, Pattern recognition and Algorithms
40. "Deep Neural Networks and its Applications", One day Symposium on Numerical Computing and its Applications, at the Department of Basic Sciences UET Peshawar, Feb 28, 2017.
41. Attended "2nd National Artificial Intelligence Seminar (NAIS-2023), NCP, Islamabad, 2023.
42. "Introduction to Deep Convolutional Neural Networks", Electrical department, COMSATS Attock, 04 November 2016.
43. "Deep Neural Networks; An Introduction" in workshop "Introduction to Deep Neural Networks", DCIS, PIEAS, 26-27 August 2016.
44. "Introduction to Deep Convolutional Neural Networks" in workshop "Introduction to Deep Neural Networks", DCIS, PIEAS, 26-27 August 2016.
45. "Deep Neural Networks & DGX-1 Supercomputer" in workshop "Introduction to Deep Neural Networks", DCIS, PIEAS, 26-27 August 2016.
46. Basics of Research and Supervision Styles, FET, Islamic University, Islamabad, May 24, 2016.
47. Basics of Writing a Research Grant Proposal, Islamia College Peshawar, 25 April 2016.
48. Basics of Research and Supervision Styles, APPLIED AND COMPUTATIONAL MATHEMATICS, COMSATS Islamabad, 29 March 2016.
49. Basics of Research and Supervision Styles, CUST Islamabad, 4rth February 2016.
50. Basics of Research and Supervision Styles, COMSATS Attock, 22nd January 2016.
51. Basics of Research and Supervision Styles, Catholic University, Daigu, South Korea, November 18, 2015.
52. Computed Tomography, Catholic University, Daigu, South Korea, November 18, 2015.
53. Genetic Programming and its Applications, GIST, Gwangju, South Korea, November 21, 2015.
54. Basics of Research and Supervision Styles, CNU, Gwangju, South Korea, November 24, 2015.
55. Basics of Structuring a Technical Manuscript, workshop, DCIS, PIEAS, Sep 29-30, 2015.
56. Basics of Genetic Programming and its GPLab Toolbox, COMSATS Attock, Pakistan, July 03, 2015.
57. PhD research and Beyond; A Supervisor's Perspective, DCIS, PIEAS, December 31, 2014.
58. Basics of Writing a Research Grant Proposal, DCIS, PIEAS, April 23, 2014.
59. Mitochondria Prediction of Malaria Parasite and its Applications in Drug Discovery: 13 July 2012, Catholic University of Korea, Daegu, South Korea.
60. Basics of Digital Image Watermarking and its Applications in Medical Imagery: 13 July 2012, Catholic University of Korea, Daegu, South Korea.
61. Digital Image Watermarking: 13 June 2012. Quaid-i-Awam University of Engineering Science and Technology, Nawab-Shah, Pakistan.
62. Digital Watermarking: Basic Concepts and Applications, 13 October 2011, Vienna University of Technology, Austria.
63. Delivered one full day lectures at "Two weeks training course on Image Processing and Artificial Neural Network", PINSTECH, Islamabad, 07-18 June 2010.
64. Intelligent Structuring of a Digital Watermark, Seminar, April 2007, GIST, Gwangju, South Korea.
65. Intelligent Extraction of a Digital Watermark from a Distorted Image, Seminar, Nov. 2007, GIST, Gwangju, South Korea.
66. Genetic Perceptual Shaping of a Digital Watermark, Seminar, June 2006, PIEAS, Pakistan.

Conference Sessions Chaired/ Seminars & Workshops Attended/organized

- Introduced PAIC to an Industrial Visit, 25 March, 2026.
- Arranged and conducted CMS Management Committee Meeting, July 2025 at PIEAS.
- Arranged as a technical member the 49th International Nathiagali Summer College Activity - II: Advanced Artificial Intelligence and Machine Learning Technologies (29th June-2nd July 2024)
- Presented at R& D Borad; "Restructuring of PIEAS Programs; Artificial Intelligence, Quantum Computing, and Cyber Security".
- "AI Vision" for Strat Commissions, at SPD, 11 Sep 2023
- Chairing of IBCAST 2022 session, 17 August 2022.
- Participation in International Defense Exhibition and Seminar (IDEAS Nov 15, 2022, Karachi).
- SPD "AI Applications in Cyber Security", Two Weeks Workshop, October 2022.
- SPD "AI Applications in Cyber Security", Two Weeks Workshop, October 2021.
- Chaired Session at ICET, Dec 27, 2017, HEC, Islamabad; Signal, Speech Processing, Pattern recognition and Algorithms
- Organizing Workshop on "Introduction to Deep Neural Networks", DCIS, PIEAS, 26-27 August 2016.
- Organizing Workshop on "Basics of Research and Grants", DCIS, PIEAS, 29-30 August 2016.

- Launching Successful IT Startups, PSEB's Workshop Series for IT Startups & Entrepreneurs, January 13th & 14th, 2016, Shelton Greens Hotel, Saddar, Peshawar Cant, KPK.
- Organized a workshop on "Basics of Research and Technical Writing Skills", DCIS, PIEAS, Sep 29-30, 2015.
- Attended Quality Policy Implementation Program (QPIP), at ICCC, Sep 21-22, 2015.
- Invited Talk at "Future of Identity" workshop; "Protection of Medical Images and Patient related Information Using an Intelligent Reversible Watermarking Technique"; City University London, UK, November 13-14, 2014.
- Chaired session; "Pattern Recognition and Artificial Intelligence", International Conference on Emerging Technologies, IEEE ICET December 9-10, 2013.
- Attended workshop on "Writing Winning Research Proposals", at COMSATS Islamabad, November 28-29, 2013.
- Attended Seminar on Future of Research in Pakistan and Projects Exhibition, HEC, Islamabad, May 18, 2013.
- Two weeks workshop attended at AS-ICTP, Trieste, Italy from 26 November-07 December 2012 on "WINTER SCHOOL ON QUANTITATIVE SYSTEMS BIOLOGY".
- Chaired session; "Computer Vision and Image processing", International Conference on Emerging Technologies, IEEE ICET, October 2010.
- Chaired session; "Bioinformatics and Image processing", International Conference on Emerging Technologies, IEEE ICET October 09, 2012.
- Co-Chaired; 4rth IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, Oct. 12-15, 2008, Beijing, China.
- Three Weeks Basic Management Course, PIEAS, 2010.

International Journal Publications:

		Impact Factor
1.	Khan, A., Rauf, Z., Sohail, A., Khan, A. R., Asif, H., Asif, A., & Farooq, U. (2023). A survey of the vision transformers and their CNN-transformer based variants. Artificial Intelligence Review, 56(Suppl 3), 2917-2970, (2023), Review, Springer Nature, 2023.	13.9
2.	Data-driven strategies for drug repurposing: insights, recommendations, and case studies, accepted in Briefings in Bioinformatics, 2025.	7.7
3.	A recent survey of artificial intelligence-based modelling and control of droplet dynamics in microfluidics, Chemical Papers, 2026. (Impact Factor=2.5).	
4.	A Physics-Guided and Self-Adaptive Multi-Agent Framework for Jet Anomaly Detection, Preprint, 2026.	
5.	Balancing Progress and Ethics in AI: A Survey of Opportunities, Risks, and Responsible Innovation, TechRiv, 2026.	
6.	Emergent Intelligence in Multi-Agent and LLM Systems: A Survey and Perspective Toward Autonomous, Collaborative, and Generalizable AI	3.8
7.	Khan FB, Tayyab U, Durad MH, Khan A, Khan FA, Hussain A. 2025. Semantic-aware framework for zero-shot malware classification via attention-based relation network. PeerJ Computer Science 11:e3408 https://doi.org/10.7717/peerj-cs.3408.	
8.	Industrial Network Intrusion Detection Using a Multilayer Perceptron: Experimental Evaluation on The Tennessee Eastman Process, Expert Systems with Applications, 2026.	7.5
9.	A Comprehensive Survey on the Foundations and Future of Artificial General Intelligence, pre-print, IEEE Techrxiv, 2025	
10.	Khan, Asifullah, et al. "A recent survey of vision transformers for medical image segmentation." IEEE Access (2025).	3.47
11.	Khan, Asifullah, Laiba Asmatullah, Anza Malik, Shahzaib Khan, and Hamna Asif. "A Survey on Self-supervised Contrastive Learning for Multimodal Text-Image Analysis." arXiv preprint arXiv:2503.11101 (2025).	--
12.	Ali, Syed Haider, Asrar Ahmad, Muhammad Ali, Asifullah Khan, and Nadeem Shaukat. "Automated MRI Tumor Segmentation using hybrid U-Net with Transformer and Efficient Attention." *arXiv preprint arXiv:2506.15562* (2025).	
13.	Zubair, Tehreem, Syeda Kisaa Fatima, Noman Ahmed, and Asifullah Khan. "Crime Hotspot Prediction Using Deep Graph Convolutional Networks." *arXiv preprint arXiv:2506.13116* (2025).	

14. Khan, Asifullah, Muhammad Zaeem Khan, Saleha Jamshed, Sadia Ahmad, Aleesha Zainab, Kaynat Khatib, Faria Bibi, and Abdul Rehman. "Advances in llms with focus on reasoning, adaptability, efficiency and ethics." *arXiv preprint arXiv:2506.12365* (2025).
15. Khan, Asifullah, Rahat Hameed, Hira Amjad, Muhammad Ahmed Bilal, Dure Shahwar Fazal, Afshan Rehman, Sohaib Naveed Chohan, and Summuyya Munib. "A Survey of Next-Generation AI and Its Evolving Landscape." *Authorea Preprints* (2025).
16. Fatima, Syeda Kisaa, Tehreem Zubair, Noman Ahmed, and Asifullah Khan. "AutoGen Driven Multi Agent Framework for Iterative Crime Data Analysis and Prediction." *arXiv preprint arXiv:2506.11475* (2025).
17. A. Rehman and Asifullah Khan, Multi-Axis Vision Transformer for Medical Image Segmentation, accepted in Engineering Applications of Artificial Intelligence, Elsevier Science, 2025. 7.5
18. Dependence of Critical Heat Flux in Vertical Flow Systems on Dimensional and Dimensionless Parameters using Machine Learning, International Journal of Heat and Mass Transfer, Elsevier Sciences, 2024. 5.3
19. Khan, Faiza Babar, Muhammad Hanif Durad, Asifullah Khan, Farrukh Aslam Khan, Muhammad Rizwan, and Aftab Ali. "Design and Performance Analysis of an Anti-Malware System based on Generative Adversarial Network Framework." IEEE Access (2024). 3.47
20. Umme Hani, et al., ISAnWin: Inductive Generalized Zero Shot Learning Using Deep CNN for Malware Detection Across Windows and Android Platforms, PeerJ, Computer Science, 2024. 3.8
21. T. Hussain, A. Ullah, R. Z. Khalid, F. Ahmad, Fei Li, A. Khan, Data driven analysis of particulate systems for development of reliable models to determine drag coefficient of non-spherical particles, 10.1016/j.partic.2024.12.006, Particuology, Elsevier Sciences, 2024. 4.1
22. Enhancing Accuracy of Prediction of Critical Heat Flux in Circular Channels by Ensemble of Deep Sparse Autoencoders and Deep Neural Networks, Nuclear Engineering and Design, 2024. 1.9
23. Khan, Asifullah, et al. "A Survey of the Self Supervised Learning Mechanisms for Vision Transformers", arXiv preprint, arXiv:2408.17059.
24. Khan, Asifullah, et al. "A Recent Survey of Vision Transformers for Medical Image Segmentation." arXiv preprint arXiv:2312.00634 (2023).
25. Usman, M., Shahid, M. H., Ejaz, M., Hani, U., Fatima, N., Khan, A. R., ... & Mirza, N. M. (2024). Particle Multi-Axis Transformer for Jet Tagging. arXiv preprint arXiv:2406.06638.
26. DC-AAE: Dual Channel Adversarial Autoencoder with Multitask Learning for KL Grade Classification in Knee Radiographs, Computers in Biology and Medicine. 6.69
27. A. Sohail, A. Khan, H. Nisar, S. Tabassum, and A. Zameer, Mitotic Nuclei Analysis in Breast Cancer Histopathology Images using Deep Ensemble Classifier, Medical Image Analysis, Vol 72 (2021): 102121, Elsevier Science. 13.83
28. CB-HVT Net: A channel-boosted hybrid vision transformer network for lymphocyte detection in histopathological images, IEEE Access, 2023. 3.36
29. Ali, Momina Liaqat, et al. "CB-HVTNet: A channel-boosted hybrid vision transformer network for lymphocyte assessment in histopathological images." arXiv preprint arXiv:2305.09211 (2023).
30. Rehman, Abdul, and Asifullah Khan. "MaxViT-UNet: Multi-Axis Attention for Medical Image Segmentation." arXiv preprint arXiv:2305.08396 (2023).
31. A Survey of Deep Learning Techniques for the Analysis of COVID-19 and their usability for Detecting Omicron, accepted in Journal of Experimental & Theoretical Artificial Intelligence, 2023. 2.29

32. Lymphocyte Detection for Cancer Analysis using a Novel Fusion Block based Channel Boosted CNN, Nature Scientific Reports, 2023. 4.99
33. Detection of Data Scarce Malware using One-shot Learning with Relation Network, IEEE Access, 2023 3.46
34. U. Zahoora, M. Raja Rajan, Z. Pan, A. Khan, Zero-day Ransomware Attack Detection using Deep Contractive Autoencoder and Voting based Ensemble Classifier, " Applied Intelligence 52.12 (2022): 13941-13960. 5.08
35. SSMD-UNet: Semi-supervised Multi-Task Decoders Network for Diabetic Retinopathy Segmentation, Nature Scientific Reports, 2023. 4.99
36. A. Mushtaq, I. Ul Haq, M. A.Sarwar, A. Khan, W. Khalil, M. A. Mughal, Multi-Agent Reinforcement Learning for Traffic Flow Management of Autonomous Vehicles, accepted in Sensors, 2023. 3.68
37. R. Z. Khalid, Atta Ullah, A. Khan, Afrasyab Khan, M. H. Inayat, Comparison of Standalone and Hybrid Machine Learning Models for Prediction of Critical Heat Flux in Vertical Tubes, accepted in Energies. 3.31
38. A. Sher, S. Tabassum, H. M. Wallace, A. Khan, A. M. Karim, S. Gul, S. C. Kang, In vitro analysis of cytotoxic activities of Monotheca buxifolia targeting WNT/β-catenin genes in breast cancer cells, Plants, 2023. 4.66
39. M. A. Arshad, S. H. Khan, S. Qamar, M. W. Khan, I, Murtaza, J. Gwak, and A. Khan, Drone Navigation Using Region and Edge Exploitation-Based Deep CNN, IEEE Access, 2022. 3.47
40. S. H. Khan, A. Khan, Y. S. Lee, M. Hassan, W. K. Jeong, Shoulder Muscle Segmentation using Region and Edge based Deep Auto-Encoder, Multimedia tools and Applications, 2022. 2.57
41. U. Zahoora, A. Khan, M. Rajarajan, S. H. Khan, M. Asam, T. Jamal, Ransomware Detection using Deep Learning based Unsupervised Feature Extraction and a Cost Sensitive Pareto Ensemble Classifier, Nature Scientific Reports, 2022. 4.37
42. E. Mushtaq, A. Zameer. A. Khan, A two-stage stacked ensemble intrusion detection system using five base classifiers and MLP with optimal feature selection, Microprocessors and Microsystems, 2022. 3.52
43. Z. rauf, A. Sohail, S. H. Khan, J. Gwak, M. Maqbool, Attention guided multi-scale deep object detection framework for lymphocyte analysis in IHC histology images, Microscopy, Oxford Press, 2022. 2.18
44. M. Asam, S. H. Khan, A. Akbar, S. Bibi, T. Jamal, A. Khan, U. Ghafoor, and M. R. Bhutta, IoT malware detection architecture using a novel channel boosted and squeezed CNN, Nature Scientific Reports, 2022. 4.37
45. S. Qamar, S. H. Khan, A. Arshad, M. Qamar, J. Gwak, A. Khan, Autonomous Drone Swarm Navigation and Multi-target Tracking with Island Policy-based Optimization Framework, IEEE Access, 2022. 3.47
46. M. Asam, S. J. Hussain, M. Mohatram, S. H. Khan, T.Jamal, A. Zafar, A. Khan, M. U.Ali, and U. Zahoora, “Detection of Exceptional Malware Variants Using Deep Boosted Feature Spaces and Machine Learning”, Applied Sciences, 2021, 11(21), 10464. 2.68
47. S. H. Khan, N. S. Shah, R. Nuzzat, A. Majid, A. Hani, A. Khan, Malaria Parasite Classification Framework using a Novel Channel Squeezed and Boosted CNN, Microscopy, Oxford Press, 2022. 2.18
48. M. M. Zahoor, S. A. Qureshi, S. Bibi, S. H. Khan, A. Khan, U. Ghafoor, M. R. Bhutta, A New Deep Hybrid Boosted and Ensemble Learning-based Brain Tumor Analysis using MRI, DOI: 10.3390/s22072726, Sensors, 2021. 3.68
49. M. M. Zahoor, S. A. Qureshi, A. Khan, A ul Rehman, , and M. Rafique, A novel dual-channel brain tumor detection system for MR images using dynamic and static features with conventional machine learning techniques, Waves in Random and Complex Media, Taylor & Francis, https://doi.org/10.1080/17455030.2022.2070683 4.85
50. S. H. Khan, A. Sohail, A. Khan, Y. S. Lee, COVID-19 Detection in Chest X-ray Images Using a New Channel Boosted CNN, Diagnostics; 2022, 12(2), 267, DOI:10.3390/diagnostics,12020267. 3.70

51. A. Kiran, S. A. Qureshi , A. Khan, S. Mahmood, M. Idrees, A. Saeed, M. Assam, M. R. A. Refaai, and A. Mohamed, Reverse Image Search Using Deep Unsupervised Generative Learning and Deep Convolutional Neural Network, Applied Sciences, 2022. 2.68
52. S. H. Khan, A. Sohail, A. Khan; M. Hassan, Y. S. Lee, J. Alam, A. Basit, S. Zubair, COVID-19 Detection in Chest X-ray Images using Deep Boosted Hybrid Learning, Computers in Biology and Medicine, 104816, 2021. 6.69
53. S. Hussain, A. Sohail, M. Mohsin, A. Khan, Coronavirus disease analysis using chest X-ray images and a novel deep convolutional neural network, Photodiagnosis and Photodynamic Therapy, 102473, 2021. 3.58
54. M. Zafar, Z. rauf, A. Sohail, S. H. Khan, A. Khan, Y. S. Lee, "Detection of Tumour infiltrating lymphocytes in CD3 and CD8 stained histopathological images using a two-phase deep CNN." Photodiagnosis and Photodynamic Therapy 37 (2022): 102676. 3.58
55. A. Mushtaq, I. U. Haq, W. U. Nabi, A. Khan, and O. Shafiq, Traffic Flow Management of Autonomous Vehicles using Platooning and Collision Avoidance Strategies, Electronics, Electronics 10, no. 10: 1221, MDPI, 2021. 2.11
56. Khan, A. Sohail, U. Zahoora, and A. S. Qureshi, A Survey of the Recent Architectures of Deep Convolutional Neural Networks, Artificial Intelligence Review 53, no. 8 (2020): 5455-5516. 10.7
57. N. Wahab, and A. Khan, Multifaceted fused-CNN based scoring of breast cancer whole-slide histopathology images, Applied Soft Computing, 97, Elsevier Sciences, 106808, 2020. 8.47
58. N. Chauhan, A. Khan, M. W. Khan, J. Shah, Deep Convolutional Neural Network and Emotional Learning based Breast Cancer Detection using Digital Mammography, Computers in Biology and Medicine, 104318, 2021 6.69
59. A. Mushtaq, Irfanul Haq, M. Usman, A. Khan, and O. Shafiq, Traffic Flow Management of Autonomous Vehicles using Deep Reinforcement Learning and Smart Rerouting,, IEEE Access 9 (2021): 51005-51019. 3.74
60. A. Sohail, A. Khan, Noorul Wahab, S. Khan, and A. Zameer, A Multi-Phase Deep CNN based Mitosis Detection Framework for Breast Cancer Histopathological Images, Nature, Scientific Reports 11, no. 1 (2021): 1-18. 4.37
61. A. Khan, A. S. Qureshi, Noorul Wahab, M. Hussain, M. Y. Hamza, A Recent Survey on the Applications of Genetic Programming in Image Processing,, Computational Intelligence, 12459, 2021. 2.33
62. N. Maroof, A. Khan, S. A. Qureshi, A. ul Rehman, R. K. Khalil, and S. O. Shim. Mitosis Detection in Breast Cancer Histopathology Images Using Hybrid Feature Space. Photodiagnosis and Photodynamic Therapy (2020): 101885. 3.58
63. S. H. Khan, A. Sohail, A. Khan, and Y. S. Lee, Classification and Region Analysis of COVID-19 Infection using Lung CT Images and Deep Convolutional Neural Networks, arXiv preprint arXiv:2009.08864, 2020 --
64. N. Chauhan, A. Khan, and H. U, Rashid, Network Anomaly Detection using Channel Boosted and Residual Learning based Deep Convolutional Neural Network, Applied Soft Computing 83 (2019): 105612. 8.47
65. F. Shahid, A. Z. Jafery, J. Hassan, K. Safdar, and A. Khan, “Wind Power Prediction using a Three Stage Genetic Ensemble and Auxiliary Predictor”, Applied Soft Computing, Elsevier Sciences, 2020. 8.47
66. A. Khan, S. Hussain, et al., Coronavirus Disease Analysis using Chest X-ray Images and a Novel Deep Convolutional Neural Network, ResearchGate preprint, April 14 2020, DOI: 10.13140/RG.2.2.35868.64646. --
67. A. Ashraf, A. Aziz, U. Zahoora, and A. Khan. "Ransomware Analysis using Feature Engineering and Deep Neural Networks." arXiv preprint arXiv:1910.00286 (2019). --
68. A. S. Qureshi, and A. Khan, Wind Speed Prediction using Deep Ensemble Learning with a Jet-like Architecture, preprint 2020, arXiv:2002.12592.
69. A. S. Qureshi and A. Khan, Adaptive Transfer Learning in Deep Neural Networks: Wind Power Prediction using Knowledge Transfer from Region to Region and Between Different Task Domains, Computational Intelligence 35, no. 4 (2019): 1088-1112. 2.33

70. Z Q Pan et al., Recent Progress on Generative Adversarial Networks (GANs): A Survey, IEEE Access 7 (2019): 36322-36333	3. 75
71. A. Khan, A. S. Qureshi, N. Wahab, M. Hussain, and M. Y. Hamza, A Recent Survey on the Applications of Genetic Programming in Image Processing, Computational Intelligence (2019).	2.33
72. U. Ahmed, A. Khan, S. H. Khan, A. Basit, I. U. Haq, and Y. S. Lee, Transfer Learning and Meta Classification Based Deep Churn Prediction System for Telecom Industry, arXiv:1901.06091[cs.LG], 2019.	--
73. Zhaoqing Pan, He Qin, Xiaokai Yi, Yuhui Zheng, A. Khan, Low Complexity Versatile Video Coding for Traffic Surveillance System, International Journal of Sensor Networks 30, no. 2 (2019): 116-125.	1.32
74. M. Rinne, Z. U. Rehman, A. Khan, H. Xhaard, Cartography of rhodopsin-like G protein-coupled receptors across vertebrate genomes, Nature, Scientific reports, 2018.	4.37
75. N. Wahab, A. Khan, and Y. S. Lee, Transfer Learning based deep CNN for segmentation and detection of mitoses in breast cancer histopathological images, Oxford Press, Microscopy 68, no. 3 (2019): 216-233.	2.07
76. S. Khan, R. Ullah, S. Shahzad, N. Anbreen, M. Bilal, and A. Khan, Analysis of tuberculosis disease through Raman spectroscopy and machine learning, Photodiagnosis and Photodynamic Therapy,24(2018)286-291.	3.63
77. Aneela Zameer, Mohsin Majeed, M Sikander M., Muhammad Asif Zahoor Raja, Asifullah Khan, N.M. Mirza Bio-inspired heuristics for layer thickness optimization in multilayer piezoelectric transducer for broadband structures, Soft Computing, 2018.	3.63
78. A.S. Qureshi, A. Khan, N. Shamim, and H. Durad, Intrusion detection using deep sparse auto-encoder and self-taught learning, Neural Computing and Applications (2019): 1-13.	5.67
79. A. Amjad, S. Khan, M. Bilal, and A. Khan, Raman Spectroscopy based Analysis of Milk using Random Forest Classification, to appear in Vibrational Spectroscopy, 2018.	2.57
80. Bio-inspired computational heuristics for Sisko fluid flow and heat transfer models, Applied Soft Computing 71 (2018): 622-648	8.47
81. A. Khan, A. Sohail, and A. Ali, A New Channel Boosted Convolutional Neural Network using Transfer Learning, arXiv:1804.08528v3 [cs.CV], 2018.	--
82. Z. U. Rehman, A. Idris, and A. Khan, Multi-Dimensional Scaling based grouping of known complexes and intelligent protein complex detection, Computational biology and chemistry, 74, 149-156, 2018.	2.87
83. Analysis of hepatitis C infection using Raman spectroscopy and proximity-based classification in transformed domain, Biomedical Optics Express, 2018.	3.73
84. M. Arsalan, A.S. Qureshi, A. Khan, and M. Rajarajan, Protection of Medical Images and Patient Related Information in Healthcare Using an Intelligent and Reversible Watermarking Technique, Applied Soft Computing, 2017, http://dx.doi.org/10.1016/j.asoc.2016.11.044.	8.47
85. M. Hassan, Iqbal Murtaza, A. Chaudhary, and A. Khan. Robust Hidden Markov Model based Intelligent Blood Vessel Detection of Fundus Images, Computer methods and programs in biomedicine, 151, pp.193-201.	5.42
86. S. Khan, R. Ullah, S. Shahzad, S. Javaid, and A. Khan, Optical screening of nasopharyngeal cancer using Raman spectroscopy and support vector machine, Optik - International Journal for Light and Electron Optics, 2017.	2.45
87. I. Murtaza, A. Khan, N. Akhter, Object Detection using Hybridization of Static and Dynamic Feature Spaces and its Exploitation by Ensemble Classification, Neural Computing and Applications 31, no. 2 (2019): 347-361.	5.67
88. Fuel loading pattern optimization of a pressurized water reactor using varying internal weights-based particle swarm optimization, Nuclear Science and Techniques, 29(3), pp.1-10.	1.71
89. Wind Power Prediction using Deep Neural Network based Meta Regression and Transfer Learning, Applied Soft Computing 58 (2017): 742-755.	8.47

90. S. Khan, R. Ullah, A. Khan, A. Sohail, N. Wahab, M. Bilal, M. Ahmed, Random Forest based evaluation of Raman spectroscopy for dengue fever analysis, Applied spectroscopy 71, no. 9 (2017): 2111-2117. 1.53

91. N. Wahab, A. Khan, and Y. S. Lee, Two-phase deep convolutional neural network for reducing class skewness in histopathological images based breast cancer detection, Computers in biology and medicine, 85, pp.86-97, 2017. 6.69

92. A. Zameer, J. Arshad, A. Khan, and M. A. Z. Raja, Intelligent and Robust Prediction of Short-term Wind Power using Genetic Programming based ensemble of Neural Networks, vol. 134, pp. 361-372, Energy Conversion and Management, 2017. 9.79

93. A. Sidiqua, A. Khan, High-capacity reversible image watermarking using error expansion and context dependent embedding, vol. 51(13), pp. 985–987, Electronics Letters, IET, 2015. 1.32

94. S. Khan, R. Ullah, A. Khan, N. Wahab, M. Bilal, M. Ahmed, Analysis of dengue infection based on Raman spectroscopy and support vector machine (SVM), Biomedical Optics Express, 7(6): 2249–2256, 2016. 3.73

95. R. Ullah, S. Khan, A. Khan, M. Saleem, H. Ali, M. Bilal, and M. Mushtaq, Infant gender-based differentiation in concentration of milk fats using near infrared Raman spectroscopy, Journal of Raman Spectroscopy, 2017, doi:10.1002/jrs.5047. 2.97

96. S. Munib, and A. Khan, Robust Image Watermarking Technique using Triangular Regions and Zernike Moments for Quantization based Embedding, Multimedia Tools and Applications, doi: 10.1007/s11042-016-3485-0. 2.75

97. A. Khan, M. Waqas, M. Rizwan, S-O. Shim, S. Alshomrani, and A. Altalhi, Image Denoising using Noise Ratio Estimation, K-means Clustering and Non-local Means based Estimator, doi: 10.1016/j.compeleceng.2015.12.019, Computers and Electrical Engineering, 2016. 3.88

98. I. Murtza, D. Abdullah, A. Khan, M. Arif, S. M. Mirza, Cortex-Inspired Multilayer Hierarchy Based Object Detection System Using PHOG Descriptors and Ensemble Classification, doi: 10.1007/s00371-015-1155-2 , Visual Computer, 2015. 2.63

99. A. Idris and A. Khan, Churn Prediction System for Telecom using Filter-Wrapper and Ensemble Classification, Computer Journal, Oxford Press, 2016, doi: 10.1093/comjnl/bxv123. 1.76

100. S. Rathore, M. Hussain, and A. Khan, Automated colon cancer detection using hybrid of novel geometric features and some traditional features, Computers in Biology and Medicine, Vol 65 (1), pp. 279-296, 2015. 6.69

101. A. Chaudhary, M. Hassan, and A. Khan, Robust Segmentation and Intelligent Decision System for Cerebrovascular Disease, Medical & biological engineering & computing 54, no. 12 (2016): 1903-1920. 2.60

102. S.G. Javed, A. Majid, A. M. Mirza, A. Khan, Multi-denoising-based impulse noise removal from images using robust statistical features and genetic programming, Multimedia Tools and Applications 01/2015; doi:10.1007/s11042-015-2554-0 2.75

103. M. Tahir and A. Khan, Protein Subcellular Localization of Fluorescence Microscopy Images: Employing New Statistical and Texton Based Image Features and SVM based Ensemble Classification, Information Sciences, vol. 345, pp.65–80, 2016. 6.79

104. L. G. Fahad, A. Khan, and M. Rajarajan, Activity Recognition in Smart Homes with the Capability of Self Verification of Assignment, vol. 149I, pp. 1286-1298, Neurocomputing, 2015. 5.72

105. Najeebullah, A. Zameer, A. Khan, S. G. Javed, Machine Learning based short term wind power prediction using a hybrid learning model, Computers and Electrical Engineering, DOI: 10.1016/j.compeleceng.2014.07.009, 2014. 3.88

106. S. Rathore, M. Hussain, and A. Khan, GECC: Gene expression-based ensemble classification of colon biopsies samples, IEEE/ACM Transactions on Computational Biology and Bioinformatics, vol. 11 (6), pp.1131-1145, 2014. 3.71

107. J. Alam, M. Hassan, A. Khan, A. Chaudhry, Robust Fuzzy RBF Network Based Image Segmentation and Intelligent Decision-Making System for Carotid Artery Ultrasound Images, Neurocomputing, vol. 151, pp. 745–755, 2015.	5.72
108. S. Ali, A. Majid, and A. Khan, IDM-PhyChm-Ens: Intelligent decision-making system for human breast cancer using physicochemical properties of amino acids and ensemble classifier, Amino Acids, vol 46(2), pp.977-993, 2014.	3.42
109. A. Khan, A. Sidiqa, S. Munib, and S. A. Malik, A Recent Survey of Reversible Watermarking Techniques, Information Sciences, vol. 279, pp. 251-272, 2014.	6.79
110. N. Ahmed, A. Jalil, and A. Khan," Clustering Using Local and Global Exponential Discriminant Regularization", Journal of Information Science & Engineering 31, no. 3 (2015).	0.54
111. I. Hafiz, A. Khan, A. Qadir, DNA-LCEB: A High Capacity and Mutation Resistant DNA Data-Hiding Approach by Employing Hybrid 2- and 4-Fold Codons based Strategy for Synonymous Substitution in Amino Acids, Medical & Biological Engineering & Computing, Vol. 52(11), pp. 945-961, 2014.	3.42
112. M. Hassan, A. Chaudhry, A. Khan, and A. Iftikhar, Robust Information Gain based Fuzzy C-Means Clustering and Classification of Carotid Artery Ultrasound Images, Computer Methods and Programs in Biomedicine, 113(2014), pp. 593–609, 2014.	5.42
113. K. Jawad, A. Khan, Genetic Algorithm and Difference Expansion Based Reversible Watermarking for Relational Databases, Journal of Systems and Software, 86 (2013), pp. 2742-2753, 2013.	3.51
114. A. Chaudhry, M. Hassan, A. Khan, Jin Y.Kim, T. A. Tuan, Automatic Carotid Artery Image Segmentation using Snake Based Model, Journal of Korean Navigation Institute, Volume 17(1), pp. 115-122, 2013.	0
115. M. Tahir, A. Khan, H. Kaya, Protein Subcellular Localization in Human and Hamster cell lines: Employing Local Ternary Patterns of Fluorescence Microscopy Images, doi: 10.1016/j.jtbi.2013.08.017, Journal of Theoretical Biology, 2013.	2.69
116. M. Kamran, A. Khan, and S. A. Malik, A High-Capacity Reversible Watermarking Approach for Authenticating Images: Exploiting Down-Sampling, Histogram Processing, and Block Selection, Information Sciences, vol. 256, pp. 162-183, 2014.	6.79
117. M. T. Mirza, A. Khan, M. Tahir, and Y. S. Lee, MitProt-Pred: Predicting Mitochnodrial proteins of Plasmodium Falciparum Parasite using diverse physiochemical properties and Ensemble Classification, Computers in Biology and Medicine, vol. 43 (10), pp. 1502-1511, 2013.	6.69
118. S. Rathore, M. Hussain, A. Ali, and A. Khan, A Recent Survey on Colon Cancer Detection Techniques, IEEE/ACM Transactions on Computational Biology and Bioinformatics, vol. 10(3), pp. 545-563, 2013.	3.71
119. M. Hayat, A. Khan WRF-TMH: Predicting Transmembrane Helix by Fusing Composition Index and Physicochemical Properties of Amino Acid, Amino Acids, vol. 44(5), pp. 1317-1328, 2013.	3.42
120. R. Chamlawi, S. A. Malik, A. Khan, Dual-Purpose Semi-Fragile Watermark: Authentication and Recovery of Digital Images, doi: 10.1016/j.compeleceng.2013.04.024,Computers and Electrical Engineering, 2013.	3.88

121. A. Idris, A. Khan, Y. S. Lee, Intelligent Churn Prediction in Telecom: Employing mRMR feature selection and RotBoost based Ensemble Classification, vol. 39(3), pp.659-672, Applied Intelligence, 2013. 5.09

122. S. A. Malik, A. Khan, M. Hussain, K. Jawad, R. Chamlawi, and A. Jalil, Authentication of Images for 3D Cameras: Reversibly Embedding Information Using Intelligent Approaches, Journal of Systems and Software, vol. 85(11), pp. 2665-2673, 2012. 3.51

123. M. Hassan, A. Chaudhry, A. Khan, J. Y. Kim, Automatic Active Contour Based Segmentation and Classification of Carotid Artery Ultrasound Images, Journal of Digital Imaging, 10.1007/s10278-012-9566-3, 2013. 1.407

124. A. Chaudhry, A. Khan, J. Y. Kim, Q. Q. Niu, Intelligent Image Restoration Approach: Using Neural Networks to Eradicate Dilemma in Punctual Kriging, Life Science Journal, 10(1), pp. 1631-1641, 2013. 0

125. M. Chaudhry, A. Khan, A. M. Mirza, A. Ali, and J. Y. Kim, Neuro Fuzzy and Punctual Kriging Based Filter for Image Restoration, Applied Soft Computing, vol. 13, pp. 817-832, 2013. 8.49

126. M. Tahir, A. Khan, A. Majid, and A. Lumini, Fluorescence microscopy image classification using an efficient feature extraction and data balancing technique, Applied Soft Computing, vol. 13(11), PP.4231-4243, 2013. 8.49

127. Z. U. Rehman, A. Khan, Identifying GPCRs and their types with Chou's pseudo amino acid composition: An approach from multi-scale energy representation and position specific scoring matrix, Protein and Peptide Letters , vol. 19 (8), 2012 , pp. 890-903(14). 0.96

128. M. Hayat, A. Khan, Prediction of Membrane Protein Types by Using Dipeptide and Pseudo Amino Acid Composition based Composite Features, IET Communications, vol. 6 (18), pp. 3257- 3264, 2012. 1.06

129. J. Ahmed, A. Ali, and A. Khan, Stabilized Active Camera Tracking System, Journal of Real-Time Image Processing,

2.01

130. 2012, doi: 10.1007/s11554-012-0251-z.

131. M. Idrees, M. Rizwan, and A. Khan, Churn prediction in Telecommunication using Random Forest and PSO based data balancing in combination with various features selection strategies, Computers and Electrical Engineering, vol. 38(6), pp.1808-1819, 2012. 3.88

132. M. Khan, M. T. Mirza, Z. U. Rehman, H. Xhaard, Predicting G protein-coupled Receptors families using Different Physiochemical Properties and Pseudo Amino Acid Composition, Methods in Enzymology, Elsevier Science, vol. 522, pp. 61-79, 2013. 1.68

133. M. Hayat, A. Khan, and M. Yeasin, Prediction of Membrane Proteins using Split Amino Acid and Ensemble Classification, Amino Acids: Volume 42, Issue 6 (2012), Page 2447-2460. 3.42

134. M. Hayat and A. Khan MemHyb: Predicting membrane protein types by hybridizing SAAC and PSSM, Journal of Theoretical Biology, Vol 292, pp. 93-102, 2012.	2.69
135. M. Khan, A. Majid, and M. Hayat, CE-Ploc: An ensemble classifier for predicting protein subcellular locations by fusing different modes of pseudo amino acid composition, Computational Biology and Chemistry, 35 (6), pp. 218-229, 2011.	1.33
136. M. Tahir, A. Khan, and A. Majid, Protein Subcellular Localization of Fluorescence Imagery using Spatial and Transform domain Features, *Bioinformatics*, 28 (1), pp. 91-97, 2012.	7.30
137. M. Khan, S. A. Malik, A. Ali, R. Chamlawi, M. Hussain, M. T. Mahmood and I. Usman, Intelligent Reversible Watermarking and Authentication: Hiding Depth Map Information for 3D Cameras, Information Sciences, 216, pp.155-175, 2012.	6.69
138. M. Hayat and A. Khan, Discriminating Outer Membrane Proteins with Fuzzy K-nearest Neighbor algorithms based on the general form of Chou's PseAAC, Protein and Peptide Letters, BSP/PPL/E-Pub/00430, 18 (12), 2011.	0.96
139. R. Chamlawi and A. Khan, Digital Image Authentication and Recovery: Exploiting Integer Transform Based Information Embedding and Extraction, Information Sciences, 180 (2010) 4909–4928, 2010.	6.69
140. M. Hayat and A. Khan, Mem-Phybrid: Hybrid features based Prediction system for Classifying Membrane Protein Types, Analytical Biochemistry, 2012 Feb 14;424(1):35-44.	2.33
141. M. Hassan, A. Chaudhry, A. Khan, and J. Y. Kim, Carotid Artery Image Segmentation using Modified Spatial Fuzzy C-Means and Ensemble Clustering, Computer Methods and Programs in Biomedicine, vol. 108(3), pp.1261-1276, 2012.	5.48
142. M. Arsalan, S. A. Malik, and A. Khan, Intelligent Reversible Watermarking in Integer Wavelet Domain for Medical Images, Journal of Systems and Software, 8 (4), 883-894, 2012.	3.51
143. M. Naveed, and A. Khan, GPCR-Mpredictor: Multi-Level Prediction of G Protein-Coupled Receptors Using Genetic Ensemble, Amino Acids (2012) 42(5):1809–1823.	3.42
144. Z. U. Rehman, A. Khan, GPCR prediction using pseudo amino acid composition and multi-scale energy representation of different physiochemical properties, Analytical Biochemistry, 412 (2011) 173–182.	2.33
145. A. Majid, A. Khan, and Tae-Sun Choi, Predicting lattice constant of complex cubic perovskites using computational intelligent approaches, Computational materials Science, 50(6), pp.1879-1888, 2011.	3.30
146. T. H. Afridi, A. Khan, and Y. S. Lee, Mito-GSAAC: Mitochondria Prediction using Genetic Ensemble Classifier and Split Amino Acid Composition, Amino Acids (2012) 42(4):1443-1454.	3.42

147. Z. U. Rehman, A. Khan, Prediction of GPCRs using Hybrid Features and Grey Incidence Degree Measure, Protein and Peptide Letters, 18(9), pp.872-878, 2011. 0.96

148. M. Hayat, and A. Khan, Predicting Membrane Protein Types by Fusing Composite Protein Sequence Features into Pseudo Amino Acid Composition, Journal of Theoretical Biology, 271 (2011), pp. 10-17. 2.69

149. I. Usman, and A. Khan, BCH coding and intelligent watermark embedding: employing both frequency and strength selection, Applied Soft Computing Journal vol. 10 (1), pp. 332-343, 2010. 8.49

150. N. A. Memon, A. Khan, S. A. M. Gilani and M. Ahmed, Reversible Watermarking Method based on Adaptive Thresholding and Companding Technique, International Journal of Computer Mathematics, 88(8),pp.1573-1594,2011. 1.63

151. A. Majid, A. Khan, G. Javed, A. M. Mirza, Lattice Constant Prediction of Cubic and Monoclinic Perovskites using Neural Networks and Support Vector Regression, Computational Materials Science, 50(2), pp. 363-372, 2010. 3.30

152. A. Khan, A. Majid, and Tae-Sun Choi, Predicting Protein Subcellular Location: Exploiting Amino Acid Based Sequence of Feature Spaces and Fusion of Diverse Classifiers, Amino Acids, vol. 38, pp. 347-350, 2010. 3.42

153. R. Chamlawi, A. Khan, and Imran Usman, Authentication and Recovery of images using Multiple Watermarks, Computers and Electrical Engineering, 36, pp. 578-584, 2010. 3.88

154. I. Usman, A. Khan, and R. Chamlawi, Employing Intelligence in the Embedding and Decoding Stages of a Robust Watermarking system, AEU-International Journal of Electronics and Communications, 65(2011), 582-588. 3.17

155. A. Khan, M. Tariq, and Tae-Sun Choi, A Nonlinear Transform based Three Dimensional Shape Recovery from Image Focus, International Journal of Pattern Recognition and Artificial Intelligence, 24 (5), pp. 719-736, 2010. 1.37

156. A. Khan, M. H. Shamsi, and Tae-Sun Choi, Correlating Dynamical Mechanical Properties with Temperature and Clay Composition of Polymer-Clay Nanocomposites, Computational Materials Science, 45 (2), pp. 257-265, 2009. 3.30

157. M. Tariq Mahmood, A. Khan, and Tae-Sun Choi, Approximating 3D Shape through Bezier Curve and Moments in Discrete Cosine Transform, International Journal of Innovative Computing Information and Control(IJICIC), vol. 5 (10), 2009. 1.43

158. Imran Usman, A. Khan, Asad Ali, and Tae-Sun Choi, Reversible Watermarking based on Intelligent Coefficient Selection and Integer Wavelet Transform, International Journal of Innovative Computing, Information and Control (IJICIC), vol. 5 (12), 2009.	1.43
159. A. Khan, S. F. Tahir, A. Majid, and Tae-Sun Choi, Machine Learning based Adaptive Watermark Decoding in View of an Anticipated Attack, Pattern Recognition, 41, pp. 2594-2610, 2008.	8.52
160. A. Khan, S. F. Tahir, and Tae-Sun Choi, Intelligent Extraction of a Digital Watermark from a Distorted Image, IEICE TRANS. INF. & SYST, Vol.E91-D,No.7,pp.2072-2075,Jul. 2008.	0.59
161. A. Khan, M. F. Khan, and Tae-Sun Choi, Proximity Based GPCRs Prediction in Transform Domain, Biochemical and Biophysical Research Communications, 24 April, 371 (3) pp .411- 415, 2008.	3.32
162. A. Khan, and S. J. Javed, Predicting Regularities in Lattice Constants of GdfeO3-type Perovskites, Acta Crystallographica, B64, pp.120-122, 2008.	2.68
163. A. Chaudhry, A. Khan, A. Ali and Anwar M. Mirza, A Hybrid Image Restoration Approach: Using Fuzzy Punctual Kriging and Genetic Programming, International Journal of Imaging Systems and Technology, John Wiley & Sons, vol. 17, no. 4, pp. 224-231, 2007.	2.17
164. R. Chamlawi, A. Khan, and A. Idris, Wavelet Based Image Authentication and Recovery, Journal of Computer Science and Technology, Springer Verlag, vol. 22, no. 6, pp. 795-804, 2007.	1.87
165. J. Javed, A. Khan, A. Majid, A. M. Mirza, and J.Bashir, Lattice Constant Prediction of orthorhombic ABO3 Perovskites using Support Vector Machines, Computational Materials Science, Elsevier Science, vol. 39, no. 3, pp. 627-634, 2007.	3.30
166. A. Khan and Anwar M. Mirza, Genetic Perceptual Shaping: Utilizing Cover Image and Conceivable Attack Information Using Genetic Programming, Information Fusion, Elsevier Science , vol. 8, no. 4, pp. 354-365, 2007.	17.56
167. M. F. Khan, A. Khan, A. M. Khan, A. Kavokin, Using Multi Level Nearest Neighbor Classifiers for G-protein Coupled Receptor Sub-families Prediction, Bioinformatics Research and Applications, Lecture Notes in Computer Science (LNCS), vol. 4463, pp. 564-576, 2007.	0
168. I. Usman, A. Khan, R. Chamlawi, A. Majid, Image authenticity and perceptual optimization via genetic algorithm and a dependence neighborhood, International Journal of Applied Mathematics and Computer Sciences, 4(1), 615-620, 2007.	2.52
169. A. Khan, A Novel Approach to Decoding: Exploiting Anticipated Attack Information Using Genetic Programming, International Journal of Knowledge-Based Intelligent Engineering Systems, vol. 10, no. 5, 2006, pp. 337-347.	0

170. A. Khan, Anwar M. Mirza and A. Majid, Intelligent Perceptual Shaping of a Digital Watermark: Exploiting Characteristics of Human Visual System, International Journal of Knowledge-Based Intelligent Engineering Systems, vol. 10, no. 3, 2006, pp. 213-223.	0
171. A. Khan, A. M. Mirza, A, Majid, Optimizing Perceptual Shaping of a Digital Watermark Using Genetic Programming, Iranian Journal of Electrical and Computer Engineering (IJECE), vol. 3, pp. 144-150, 2004.	0
172. A. Khan, A. Majid, and Anwar M. Mirza, Combination and Optimization of Classifiers in Gender Classification Using Genetic Programming, International Journal of Knowledge-Based Intelligent Engineering Systems, vol. 9, page 1-11, 2005.	0
173. A. Majid, A. Khan and Anwar M. Mirza, Combining Support Vector Machines Using Genetic Programming, International Journal of Hybrid Intelligent Systems, vol. 3, No. 2, 2006, pp. 109-125.	0
174. L. Gillani, A. Khan, and A. M. Mirza. Distortion Estimation in Digital Image Watermarking using Genetic Programming, International Journal of Applied Mathematics and Computer Sciences, Vol. 15, pp. pp. 103- 108., Oct, 2006.	2.19
175. K. M. Khan, A. Khan. Catalytic reduction of NO with H2 on a square surface: a Monte Carlo simulation study. Journal of Physics: Condensed Matter, vol.14, No. 34, (2002) 7919-7931.	2.65
176. J. Bashir, N. Iqbal, R. T. A. Khan, M. J. Akhtar, A. Khan, and C. A. Majid. X-Ray Powder Diffraction Analysis of Crystal Structure of Lanthanum Orthovandate. Nucleus, 38 (1) 2001, 1-5.	0.0
177. J. Bashir, R. T. A. Khan, M. N. Khan, N. Iqbal, A. Waheed, A. Khan, and Q. Zaman. Upgradation of the Triple Axis Neutron Spectrometer TKSN-400 Installed at PARR-1. Nucleus, 38 (1) 2001, 23-28.	0.0

International Conference Publications:

1. Khalid, R. Z., Hussain, T., Ullah, A., & Khan, A. (2024, March). Prediction of Condensation Heat Transfer of Passive Cooling Systems in Nuclear Power Plants through Machine Learning. In 2024 7th International Conference on Energy Conservation and Efficiency (ICECE) (pp. 1-7). IEEE.
2. CB-UNet: A Channel boosted UNet architecture for lymphocyte detection in histopathological images, in 2023 20th International Bhurban Conference on Applied Sciences and Technology (IBCAST) …IEEE 2023.
3. A Hybrid Framework of Meta-Learning and Generative Adversarial Networks for Few-Shot Malware Detection, In 2023 20th International Bhurban Conference on Applied Sciences and Technology (IBCAST) …IEEE 2023.
4. Momina. L. Ali, Rauf, Z., Khan, A. R., & Khan, A. (2022, August). Channel boosting based detection and segmentation for cancer analysis in histopathological images. In 2022 19th International Bhurban Conference on Applied Sciences and Technology (IBCAST) (pp. 1-6), IEEE 2022.
5. M. A. Arshad, S. H. Khan, M. W. Khan, S. Qamar, Autonomous Drone Navigation using Deep Convolutional Neural Network, accepted in ICASE 2021, IST Islamabad, December 14-16, 2021.
6. Muhammad Tayyeb Mirza, Safdar Ali, Asifullah Khan, Mehdi Hassan, Application of Artificial Intelligence for Optimized and Cost-Effective Disposal of Radioactive Waste, IAEA-CN--294, 2021.

7. R. Z. Khan, Attaullah, A. Khan, M. H. Inayat, Critical heat flux prediction for safety analysis of nuclear reactors using machine learning,19th IBCAST, Bhurban Muree, 2022.
8. Suleman Qamar, Maryam Qamar, Muhammad Shahbaz, Muhammad Arif Arshad, Najmus Saher Shah, and Asifullah Khan. "Autonomous Drone Swarm Navigation in Complex Environments." In 2022 19th International Bhurban Conference on Applied Sciences and Technology (IBCAST), pp. 290-295. IEEE, 2022.
9. Ali, M., Ismail, M., & Durad, H. (2020, October). Identification of Malware Families for Creating Generic Signatures: Using Dynamic Analysis and Clustering Methods. In 2020 International Symposium on Recent Advances in Electrical Engineering & Computer Sciences (RAEE & CS) (Vol. 5, pp. 1-6). IEEE.
10. Zafar, M. M., Rauf, Z., Sohail, A., & Khan, A. (2020, October). Lymphocyte Annotator: CD3+ and CD8+ IHC Stained Patch Image Annotation Tool. In 2020 International Symposium on Recent Advances in Electrical Engineering & Computer Sciences (RAEE & CS) (Vol. 5, pp. 1-6). IEEE.
11. Shahbaz, M., & Khan, A. (2020, October). Autonomous Navigation of Swarms in 3D Environments Using Deep Reinforcement Learning. In 2020 International Symposium on Recent Advances in Electrical Engineering & Computer Sciences (RAEE & CS) (Vol. 5, pp. 1-6). IEEE.
12. Khan, M. W., Khan, A., Khurshid, A., & Ali, M. (2020, October). Development of a Low-Cost Sensor-Based Adaptive Gripper. In 2020 International Symposium on Recent Advances in Electrical Engineering & Computer Sciences (RAEE & CS) (Vol. 5, pp. 1-6). IEEE.
13. Shakeel, M. F., Bajwa, N. A., Anwaar, A. M., Sohail, A., & Khan, A. (2019, June). Detecting driver drowsiness in real time through deep learning based object detection. In International Work-Conference on Artificial Neural Networks (pp. 283-296). Springer, Cham.
14. T. Qasim, H. Durad, et al., Detection of Signaling System 7 Attack in Network Function Virtualization using Machine Learning, IBCAST 2018, Islamabad.
15. Aziz, A., Sohail, A., Fahad, L., Burhan, M., Wahab, N., & Khan, A. (2020, January). Channel Boosted Convolutional Neural Network for Classification of Mitotic Nuclei using Histopathological Images. In 2020 17th International Bhurban Conference on Applied Sciences and Technology (IBCAST) (pp. 277-284). IEEE.
16. T. Jamal, P.Amaral, A. Khan, A. Zameer, K. Ullah, and S.A. Butt, Denial of Service Attack in Wireless LAN, ICDS 2018.
17. S. Jamil, A. Khan, Churn Comprehension Analysis for telecommunication Industry using ALBA, in proceedings of IEEE ICET Conference, 18-19-October 2016, H-9, HEC Islamabad, Pakistan.
18. A. Qadeer, S. Munib, and A. Khan, Smart Phone based Online Medicine Authentication Using Print-Cam Robust Watermarking, 13th International Conference on Frontiers of Information Technology (FIT-2015), pp.222-227, December 2015, Islamabad, doi: 10.1109/FIT.2015.47.
19. A. Rehman, N. Chauhan, and A. Khan, Diverse and Discriminative Features based Breast Cancer Detection using Digital Mammography, 13th International Conference on Frontiers of Information Technology (FIT-2015), pp.234-239, December 2015, Islamabad, 10.1109/FIT.2015.69.
20. M. Hassan, A. Asif, A. Chaudhry, A. Khan, I. Murtaza, “Pattern classification using genetic algorithm based Adaboost ensemble classifier”, ICT International Symposium on Smart Appliances, Electronics and Computer, CNU, S. Korea, 2015.
21. A. Idris, A. Khan, Ensemble based Efficient Churn Prediction Model for Telecom, IEEE Frontiers of Information Technology (FIT) Islamabad, 17-19 December, 2014.
22. Mirza, Muhammad Talhah, et al. "A New Hybrid Domain Based Print-Scan Resilient Image Watermarking Technique." Frontiers of Information Technology (FIT), 2014 12th International Conference on. IEEE, 2014.

23. J. Arshad, A. Zameer and A. Khan, Wind Power Prediction using Genetic Programming (GP) based ensemble of Artificial Neural Networks, IEEE Frontiers of Information Technology (FIT) Islamabad, 17-19 December, 2014.
24. K. M. Asim, I. Murtza, A. Khan, Efficient and Supervised Anomalous Event Detection in Videos for Surveillance Purposes, IEEE Frontiers of Information Technology (FIT) Islamabad, December, 17-19 December, 2014.
25. Waqas, G. Javed, and A. Khan, Random-valued Impulse Noise Removal from Images: K-means and Luo-Statistics based Detector and Nonlocal Means based Estimator, IEEE IBCAST, 2013.
26. D. Abdullah, I. Murtaza, A. Khan, Feature extraction and reduction strategy based on Pyramid HOG and Hierarchal Exploitation of Cortex-Like Mechanisms, IEEE INMIC 2013.
27. N. Ahmed, A. Jalil, and A. Khan, Multimodal Image Clustering Using Nonlinear Manifold Information, Proceedings of 5th World Engineering Congress 2013, 23-25 September 2013, NUST, Islamabad, Pakistan.
28. N. Hussain, G. Javed, A. Khan, and M. Hussain, Particle Swarm Optimization based Object Tracking using HOG Features IEEE ICET 2013.
29. S.Rathore, M. Hussain, A. Khan, A novel approach for colon biopsy image segmentation, Proceedings of the International Conference on Complex Medical Engineering (CME), pp. 134-139, 2013.
30. M. Hassan, A. Chaudhry, A. Khan, M. A. Iftikhar, and J. Y. Kim, Medical Image Segmentation Employing Information Gain and Fuzzy C-Means Algorithm, IEEE ICOSST, December 2013, Lahore.
31. A. Idrees, A. Khan, Y. S. Lee, Genetic Programming and Adaboosting based churn prediction for Telecom, Proceedings of SMC2012, IEEE International Conference on Systems, Man, and Cybernetics, October 2012, Seoul, S. Korea, pp. 1328 – 1332.
32. Aidris, A Khan, Customer churn prediction for telecommunication: Employing various features selection techniques and tree based ensemble classifiers, 15th International Multitopic Conference (INMIC), 2012, pp. 23-27A.
33. Ali, I. Butt, A. Khan, Browse back post event analyzer, Frontiers of Information Technology, Dec, 2011, Islamabad, Pakistan.
34. M. Kashif, M. T. Javed, A. Khan, A.Majid, "Prediction of Thar coal combustion characteristics using Artificial Neural Network," 34th International Symposium on Combustion, Warsaw, Poland, July 29-August 3, 2012.
35. N. Ahmed, A. Jalil, A. Khan, Feature Selection based Image Clustering using Local Discriminant Model and Global Integration, Proceedings of IEEE 14th International Multitopic Conference Karachi, Pakistan, December 22-24, 2011.
36. A. Chaudhry, M. Hassan, A. Khan, J. Y. Kim, T. A. Tuan, Image clustering using improved spatial fuzzy C-means, ICUIMC '12: Proceedings of the 6th International Conference on Ubiquitous Information Management and Communication, Malaysia, 2012.
37. N. Ahmed, A. Jalil, A. Khan, Performance Improvement in Image Clustering using Local Discriminant Model and Global Integration, Proceedings of International Bhurban Conference on Applied Sciences & Technology, Islamabad, Pakistan, January 9-12, 2012.
38. M. Arsalan, Sana A. Malik, A. Khan, Intelligent threshold selection for reversible watermarking of medical images, Genetic and Evolutionary Computation Conference, GECCO 2010, Proceedings, Portland, Oregon, USA, July 7-11, 2010, pp.1909-1914.
39. M. Hassan, A. Chaudhry, A. Khan, An Optimized Fuzzy C-Means Clustering with Spatial Information for Carotid Artery Image Segmentation, In proceedings of 8th IBCAST, January 10-13, 2011, National Centre for Physics, Quaid-i-Azam University, Islamabad, Pakistan.
40. M. Hayat, A. Khan, Prediction of Membrane Protein Types using Pseudo-Amino Acid Composition and Ensemble Classification, IEEE International Conference on Intelligence and Information Technology (ICIIT), Oct 28-30, 2010, Lahore.
41. M. Hayat, A. Khan, Membrane Protein Prediction using Wavelet Decomposition and Pseudo Amino Acid based Feature Extraction, Proceedings of the 6th IEEE International Conference on Emerging Technologies, (ICET 2010), October, 2010, pp.1-6 (received best paper award).

42. Imran Usman, A. Khan, Rafiullah Chamlawi, and Tae-Sun Choi, A Generalized Approach for Embedding Watermark in Digital Images using LDPC Codes and Genetic Programming, International Conference on Applied Soft Computing, November 2008.
43. Rafiullah Chamlawi, Imran Usman, and A. Khan, Dual Watermarking Method for Secure Image Authentication and Recovery, IEEE International Multitopic Conference INMIC, pp. 270-273, December 14-15, 2009.
44. R. Chamlawi, C-T Li, I. Usman, A. Khan, Authentication and Recovery of Digital Images: Potential Application in Video Surveillance and Remote Sensing, Conference on Consumer Electronics 2009, 10-14 Jan. 2009, Las Vegas, USA.
45. Imran Usman, A. Khan, Asad Ali, and Tae-Sun Choi, Reversible Watermarking based on Intelligent Coefficient Selection and Integer Wavelet Transform, Int. Symposium on Intelligent Informatics (ISII2008), Dec. 12-13, 2008 Tokai University, Kumamoto Campus, Kumamoto, Japan.
46. M. Tariq Mahmood, A. Khan, and Tae-Sun Choi, Approximating 3D Shape through Bezier Curve and Moments in Discrete Cosine Transform, International Symposium on Intelligent Informatics (ISII2008), December 12-13, 2008 Tokai University, Kumamoto Campus, Kumamoto, Japan.
47. A. Khan, M. Tariq Mahmood, Asad Ali, Imran Usman, and Tae-Sun Choi, Variable Threshold Based Reversible Watermarking: Hiding Depth Maps, 4rth IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, Oct. 12-15, 2008, Beijing, China.
48. M. Tariq Mahmood, W. Gin, A. Khan, and Tae-Sun Choi, A Transformed Domain based Novel Focus Measure for 3D Shape Recovery, IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, Oct. 12-15, 2008, Beijing, China.
49. M. Tariq Mahmood, Seong-O Shim, A. Khan and Tae-Sun Choi, Accurate Depth Approximation through Bezier-Bernstein Polynomial for 3D Cameras, 27th Inter. Conference on Consumer Electronics 2009, 10-14 Jan. 2009, Las Vegas, USA.
50. A. Khan, M. Tariq Mahmood, Asad Ali, Imran Usman, and Tae-Sun Choi, Hiding Depth Map of an Object in its 2D Image: Reversible Watermarking for 3D Cameras, 27th Inter. Conference on Consumer Electronics 2009, 10-14 Jan. 2009, Las Vegas, USA.
51. M. Tariq Mahmood, A. Khan, and Tae-Sun Choi, Shape From Focus based on Bilateral Filtering and Principal Component Analysis, International Conference on Applied Soft Computing, 2008.
52. Labiba Gilani, Syed FahadTahir, A. Khan, Intelligent Extraction of Hidden Information from a Distorted Stego Image, Proceedings of the 2008 International Conference on Genetic and Evolutionary Methods, GEM 2008, July 14-17, 2008, Las Vegas, Nevada, USA. CSREA Press 2008, ISBN 1-60132-069-8.
53. A. Chaudhry, R. Chamlawi, A. M. Mirza and A. Khan, An Amalgamation of Linear and Non-Linear Image Restoration Filters Using Genetic Programming, Fifth International Conference on Computer Science (ICCS 2008), April 25-27, 2008.
54. M. F. Khan, A. M. Khan, A. Khan, and A. Bangash, Prediction of Protein Sub-Cellular Localization through Weighted Combination of Classifiers, Proc. Of IEEE International Conference on Electrical Engineering (ICEE 2007), April 11-12, 2007, Lahore, Pakistan.
55. M. F. Khan, A. M. Khan, A. Khan, Tai-Sun Choi, and N. Iqbal G-protein Coupled Receptor Subfamilies Prediction Based on Nearest Neighbor Approach , Proceedings of 7th IEEE International Conference on Bioinformatics & BioEngineering (BIBE), Boston, USA, pp. 1348-1354, 14-17 October 2007.
56. Kashif Iqbal, Ajmal Bangash, Asmatullah Chaudhry, and A. Khan, Activity based Contrast Enhancement of Compressed Digital images in DCT Domain, IEEE International Conference on Electrical Engineering (ICEE 2007), April 11-12, 2007, Lahore, Pakistan.
57. A. Chaudhry, K. Iqbal, A. Khan and A.M. Mirza, Enhancing Contrast of Compressed Images: Reducing Block Artifacts Adaptively, Proceedings of the International IEEE Conference (INMIC 2006), Pakistan, Dec. 2006, pp. 140-145.

58. A. M. Khan, and A. Khan, Fusion of Visible and Thermal Images Using Support Vector Machines, Proceedings of the International IEEE Conference (INMIC 2006), Pakistan, Dec. 2006, pp. 146-151.
59. A. Majid, A. Khan and Anwar M. Mirza Intelligent combination of Kernels information for improved classification, Proc. Of International conference on machine learning and its applications ICMLA'05, Los Angeles, USA, 2005, pp. 16-21.
60. A. Khan, S. A. Husain, A. M. Mirza, Asmatullah. Optimizing ROC curves using Genetic Programming. TECHCOM, Karachi, 2003.
61. A. Majid, A. Khan, and Anwar M. Mirza, Gender Classification using Cosine Discrete Transformation: A Comparison of Different Classifiers, Proceedings of the International IEEE Conference (INMIC 2003), Pakistan, Dec. 2003.
62. A. Majid, A. Khan, and Anwar M. Mirza, Improving Performance of Nearest Neighbourhood Classifier Using Genetic Programming, in the proc. Of International conference on machine learning and its applications ICMLA'04, KY, USA, 16-18 Dec. 2004, pp. 469-75.
63. A. Majid, Anwar M. Mirza and A. Khan, Combining Nearest Neighbourhood Classifiers Using Genetic Programming Proceedings of the International Multi-topic (INMIC 2005), IEEE Conference, December, Pakistan, pp.1-6.
64. Asmatullah, A.M. Mirza, A. Khan, Blind Image Restoration Using Back Propagator, Proceedings of the International Multi-topic (INMIC 2003), IEEE Conference, December Islamabad, pp. 55-58.
65. Abdul Majid, A. Khan and Anwar M. Mirza Gender Classification using Cosine Discrete Transformation: A Comparison of Different Classifiers, in the Proc. of the Int. Multi-topic, IEEE Conference (INMIC 2003), Dec.2003, Islamabad, pp. 59-64.

PhD Thesis: Khan, A. (2006). Intelligent perceptual shaping of a digital watermark (Doctoral dissertation, PhD thesis, Computer Science and Engineering, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Pakistan).

Book Chapters:

1. A. Khan and I. Usman, Intelligent Perceptual Shaping in Digital Watermarking, Information Hiding and Applications, Studies in Computational Intelligence, Chapter 6, pp. 115-139, Vol. 227, 2009.
2. A. Ali, A. Khan, Reversible Watermarking for 3D Cameras: Hiding Depth Maps, Recent Advances in Multimedia Signal Processing and Communications, Studies in Computational Intelligence , Vol. 231, Grgic, M., Delac, K., Ghanbari, M (Eds.), 2009, ISBN: 978-3-642-02899-1, Springer.
3. I. Usman, A. Khan, R. Chamlawi, and Tae-Sun Choi, Perceptual Shaping in Digital Image Watermarking Using LDPC Codes and Genetic Programming, Applications of Soft Computing, Advances in Soft Computing, Vol. 58, 2009, Springer Berlin/ Heidelberg.
4. M. T. Mahmood, A. Khan, and Tae-Sun Choi, Shape from Focus Based on Bilateral Filtering and Principal Component Analysis, Applications of Soft Computing, Advances in Soft Computing, Volume 58, 2009, Springer Berlin / Heidelberg.
5. I. Usman, A. Khan, R. Chamlawi, and A. Majid, Towards a better robustness-imperceptibility tradeoff in digital watermarking, Khaled Elleithy (ed.), ISBN: 978-1-4020-8734-9, Innovations and Advanced Techniques in Systems, Computing Sciences and Software Engineering, Springer, 2008, pp. 226-230.
6. K. Iqbal, A. Chaudhry, A. Khan, and A. Bangash, Multiscale Contrast Enhancement for Compressed Digital Images with Block Artifacts Consideration, T. Sobh (ed.), ISSN: 978-1-4020-6267-4, Innovations and Advanced Techniques in Computer and Information Sciences and Engineering, Springer, 2007, pp. 267-272.
7. A. Majid, A. Khan, Lattice Constant Prediction of Perovskites using Machine Learning Approaches, Advances in Materials Science Research, Volume 4, Nova Science Publishers, INC. NY 11788, ISBN: 978-1-61761-997-7, year 2011.
8. A. Chaudhry, M. Hassan, A. Khan, J. Y. Kim, T. A. Tuan, Automatic Segmentation and Decision Making of Carotid Artery Ultrasound Images, Intelligent Autonomous Systems 12, Advances in Intelligent Systems and Computing, Volume 194, pp 185-196, 2013.

MS students Supervised

1. Awais Masoud (DNE)	Reversible Image Watermarking of MRI Images, PIEAS, 2009.
2. Nosherwan Ali (DEE)	Image Restoration Using Computational Intelligence
3. Nusrah Hussain (DEE)	Image Based Object Tracking using Computational Intelligence
4. Namra Aftab (DEE)	Computer Vision based Intruder Detection
5. Azmat Tanvir (DEE)	Browse Back Post Event Analyzer
6. Raheel Zia (DEE)	Intelligent Image Watermarking using Swarm Intelligence
7. Jan Alam (DEE)	Fuzzy RBFNN based Carotid Artery Extraction from CT Scan Images
8. Muhammad Kashif (DCME)	Prediction of Thar Coal Combustion Characteristics using Artificial Neural Network
9. Muhammad Waqas (DEE)	Noise detection and estimation in Digital Images
10. Muhammad Umair Gul (DEE)	Reversible Watermarking based on Invariant Image Classification and Dynamic Histogram Shifting
11. Muhammad Danish Nassem (DEE)	Robust and Reversible Image Watermarking using Clustering Algorithm
12. Kamran (DEE)	Computational Intelligence based Reversible Image Watermarking
13. Faheem Ullah (DEE)	Reversible Watermarking for Electronic Medical Record (EMR) Systems
14. Duraid Abdullah (DEE)	Object Recognition by Exploiting Characteristics of Brain Cortex
15. Khawaja M. Asim (DEE)	Anomaly detection in videos for security purposes
16. M. Talhah Mirza (DEE)	Developing an image watermarking technique robust to print-scan attack
17. Qadeer Ahmed (DEE)	Smartphone based image watermarking technique for preventing forgery
18. Junaid Arshad (DEE)	Short-term Wind Power Prediction Through CI for steady power provision
19. M. Tariq Bashir (DEE)	Identifying local behaviors in crowded scenes
20. Furqan Mir (DNE 2014-15)	Computational Intelligence Based Optimization of fuel arrangement of a Nuclear Reactor
21. Noorul Ain (DCIS 2014-15)	Mitosis Detection in Breast Cancer Histopathology Images Using Hybrid Feature Space
22. Awais Rehman(DEE 2014-15)	Computer Aided Diagnosis (CAD) Based Breast Cancer Detection
23. M. Islam (DCIS 2015-16)	Churn Prediction Using GP-AdaBoost Ensemble of Class Classifiers
24. Sajjad Jamil (DCIS 2015-16)	Developing accurate churn prediction model with comprehensibility and intuitive feedback
25. Iqra Chaudhary (DCIS 2015-16)	Big Data Analytics for Enterprise Revenue Optimization
26. Amna Ali (DCIS 2016-2017)	Feature Selection and Classification of Churners for Telecom Industry
27. Uzair Ahmed (DCIS 2016-2017)	Churn Prediction Analysis using Deep Neural Networks-based Ensemble
28. Arsalan Amjad (DCIS 2016-2017)	Developing a classification system for Raman spectroscopy based analysis of milk & dairy products
29. Tooba Qasim (DCIS 2016-2017)	Detection of SS7 Attack using NFV Application
30. Javed Iqbal (DCIS 2016-2017)	Wind Power Prediction Using LSTM
31. M. Abbas (DPAM 2017-18)	Extracting Signals of Higgs Boson from Background Noise using Deep Neural Network
32. Warfana Ali (DCIS 2017-18)	Breast Cancer detection using deep learning and histopathological images
33. Huniya Sohail (DCIS 2017-18)	Acoustic Objects Detection, Localization and Classification
34. Aqsa Kiran (DCIS 2017-18)	Reverse Image Search: Techniques Implementation and Comparison
35. Faisal Amin (DCIS 2018-19)	Static Heuristics based Malware Detection System
36. Myra Khalid (DCIS 2018-19)	Signature based Malware Analysis
37. Daniyal Mehmood (DCIS 2019)	Data Augmentation using Deep Convolutional Generative Adversarial Network
38. Muhammad Mohsin (DCIS 2020)	Automated Lymphocyte Detection in IHC stained Histopathological Images using Convolution Neural Networks
39. Shahbaz (DCIS 2019-20)	Autonomous Navigation of Swarms in 3D Environments using Deep
40. Suleman Qamar, 2021	Reinforcement Learning
41. Muhammad Arif, 2021	Utilization of Deep Reinforcement Learning for Swarm Systems
42. Faiq Mansoor, DEE, 2021	Deep Convolutional Neural Network for Driving an Autonomous Drone
43. Umair Aslam, DCIS, 2021	Intrusion Detection in Cyber Physical Systems Using Deep Neural Networks
44. Momina Liaqat, DCIS, 2022	AI based Physical Intrusion Detection using Vibration Sensors

	Channel Boosting based Object Detection and Segmentation for cancer Analysis in Histopathological Images
45. Abdul Rehman, DCIS, 2023	Development of an Automated Cancer Analysis System Using Histology Images and Deep CNN
46. Umair Farooq, DCIS, 2023	Development of a Deep Jet Like Ensemble based Ransomware Detection System
47. Muhammad Rizwan, 2024	Deep Learning based Drone Detection Using Channel Boosted CNN
48. Shangool Mukhtar, 2024	Human Pose estimation using Deep Learning Techniques
49. Adnan Ijaz, DCIS, 2025	Deep Learning for Multimodal Medical Image Analysis
50. Aimen Wadood, DCIS, 2025	Multimodal Learning for Ransomware Classification
51. Asma Gull, DCIS, 2025	Adversarial Mimicry: Disguising Malicious PDFs as Harmless Documents
52. Shehryar Asadullah Khan	AI-Augmented Exploit Generation using Deep Learning
53. Waleed Muhammad	Deep Learning-Based Simulation of Nuclear Reactor for Power Maneuvering

BS students Supervised

Syed Kisaa Fatima, Tehreem Zubair	Development of an Interactive Web Portal for Crime Data Analysis
M. Hamza Azhar, Haider Ali Aurangzeb	Development of a DNN based Deepfake Video Detection System Using Multimoda
Rao Abdul Saboor, Abdul Raya	Human Pose Estimation and Behavior Analysis using Deep Learning
M. Hassaan Ibrahim, M. Abu Bakr Siddique	Development of Web Application for Lymphocyte Quantification using DL Ensem
Ayesha Faisal, Dua Javed, DCIS 2024	Development of MDCAT Chatbot App for Medical test preparation
M. Abbas Bukhari, DCIS 2024	Enhancing Endpoint Security with Endpoint Detection and Response
Usman Nasir, M. Abdulla, DCIS 2024	Accurate Drone Detection using Deep CNN and Vision Transformers
	POCA: Plagiarism Detection in Coding Assignments (2025)
Musaab Javed , Arqam Saleem, DCIS 2024	Whisper Frames
Ahmad Faraz, M. Jibran bin Saleem, DCIS 2	Development of an Android App for Human Pose Estimation using DNN
Maheen Ejaz, DPAM 2024	Jet Tagging for LHC data using CNN
M. Husnain, DPAM 2024	Jet Tagging for LHC data using CNN-Transformer approach
Nayab Fatima, DPAM 2024	Jet Tagging for LHC data using Multi-axis Transformer
M. Usman, DPAM 2024	Jet Tagging for LHC data using Swin Transformer
Ummay Hani, DPAM 2024	Jet Tagging for LHC data using Channel Boosted CNN
Ammar Sadiq, Rahimullah, Awais, DEE, 20	Artificial-Intelligence based Autonomous Flight of a swarm of Quadcopters
Linta and Hajra, 2023	Development of Lymphocyte Detection System
Adnan and Haris, 2023	Mental Health Chatbot
Shajee and Fatima, 2023	Deep Auto-Encoder Based Chatbot For PIEAS Admission-Related Inquiries
Muhammad Bilal, 2023	Deep Learning based Anticancer Drugs System Development
Ahmed Faraz and Usama, 2023	Plant Disease Classification and Detection
Marwa and Minahil, 2022	Covid Detection using Deep Learning
Zeeshan and Asad, DEE	AI-Based Autonomous Flight of a Quadcopter
Eman Zehra, DPAM	Impacts of Various Sources of Uncertainties on Cross Section Measurements
Manal Fatima, 2022	Malware Analysis using deep Ensemble Learning
Ayisha Bi Bi	Computer Network Intrusion Detection System
Abdul Rehman, Obaidullah	Exploitation of Mask-RCNN for the detection of Lymphocytes in Histopathologica
Zoha & Salma	Detection and Segmentation of Novel Coronavirus using Deep Learning
Aleena Ajaz, Ayesha Salar	Drone Detection and Tracking
Mushfirah, Nimra, Hamza	Efficient image enhancement and contrast adjustment

Dawood SherJan	Real-time Driver Drowsiness Detection using Light-weight Channel Boosted CNNs
Yahya Bakthiar	APT Classification using GP-Adaboost and Deep NN.
Ahsan Mukhtar	Breast Cancer Detection and Analysis Using Whole Slide Images
Arslan Ashraf &	Development of Ransomware Detection System using Deep Neural Networks and Tr
Abdul Aziz, 2019	Learning
Furqan and M. Ali, 2019	Malware detection using Machine Learning
Mansoor Ahmad	Automatic Segmentation of Supraspinatus Tendon from MRI of Human Shoulder
Mudasser Afzal, DCIS, 2019	Breast Cancer Classification using Histopathological Images and Channel Boosted Convolu
Muhammad Burhan &	Neural Networks
Abdullah Aziz, DCIS, 2019	Raspberry Pi based Development of Driver's Drowsiness Detector using Lightweight
Suleman Rashid	Convolutional Neural Networks
Masoud Tarar, DEE, 2019	Vision Based Drowsiness Detector for Real Driving Conditions
M. Faique S. Ahmad, M. Anwaar Nabit, Abu Bakr Bajwa, DEE 2018	Intelligent Selection of Wavelet Coefficients for Reversible watermarking of Medical image
Muhammad Arslan	Automatic Prediction of Mitochondrial proteins
Tariq HabibAfridi	Multi-level GPCRs Classification using Protein Sequences and Machine Learning Approach
Muhammad Naveed	Churn Prediction in Telecommunication using Data Mining and Machine Learning Approac
Muhammad Rizwan	DNA Sequence Watermarking using Compression, Encryption and BCH Coding
Abdul Qadir	Watermarking of Biometric Images for Template Protection
Muhammad Danish Naseem	Protection of Relational Database using Watermarking
Faheemullah	Identification of PIWI interacting RNA using Machine Learning
Zunaira Rauf, Saira Tariq	Employing Grayscale Morphological Reconstruction to Identify Candidate Airways on CT
Sarah Naeem	of Lungs
Qadeer Ahmad	Image Denoising using Hybrid Intelligent System based on Genetic Programming and P
Najeebullah Khan	Swam Optimization
Muhammad Tayyeb Mirza	Wind Power Prediction using ANN and Evolutionary Algorithms
Ibbad Hafeez	Prediction of Mitochondrial Proteins of Malaria Parasites using Machine Learning
	Developing a Robust System for Watermarking of DNA sequences
Maryam Ihtesham	
Huma Shehwa	Computational Intelligence based Medical Decision system for Identification of Carotid A Abnormalities
Adnan Shabbir	Computational Prediction of Eukaryotic Subcellular Localization
Kashifa, Maham, Waseem	
	Identification of Vascular Diseases from Carotid Artery Ultrasound Images using Intelligent Decision System
Muhammad Daniyal Nazeer	
	Development of an Anomaly Detection System for a Nuclear Power Plant using Transformer Models.
Attique Ali	
Yahya khan	Partical Identification (PID) in time of flight (TOF) of ALICE using Machine Learning
Syeda Kissa Fatima, Tehreem Zubair	Development of an Interactive Web Portal for Crime Data Analysis System Using Deep Lea
Dilawar Ali, Sabir Hussain	POCA: Plagiarism detectiOn in Coding Assignments

Haider Ali Aurangzeb, Muhammad Hamza Azhar	Development of DNN based Deepfake Video Detection System Using Multi-Modality Featu
Rao Abdul Saboor, Abdul Rafay	Human Pose Classification for Behavior Analysis using Deep Neural Networks
Asad Butt, Amna Ali	AI-Driven Vulnerability Assessment and Patching Engine
Emama Nugman, Iman Noor	DataBot – Chat with Data
Mr. Shahzaib Khan, Mr. Muhammad Naveed Akhtar	Development of AI/ML based Fake Video Detection System
Ms. Hajra, Ms. Zainab Tariq, Ms. Hafsa	Development of a Real-Time Human Pose based Threat Intelligence System
Mr. Muhammad Talal Haider, Mr. Muhammad Hammad Tahir, Mr. Ali Raza	Development of an ML-Based Detection System for Insider Threats in Cloud Environments
Mr. Abdul Rehman, Mr. Muhammad Huzaifa	CodeCraft: Automated Code Generation Suite for Enterprise Web Applications
Mr. Muhammad Umer Riaz, Mr. Muhammad Ali Qadri	Virtual Assistant for Medicine
Mr. Shahzaib Khan, Mr. Waleed Abbasi	Anomaly Detection at University Entrance Using YOLOv11
Mr. Hussain Ali Jahangir, Mr. Abu Bakar	AI-Powered Micro-Learning Platform for AI Course

List of Internship Students Supervised from (2024 to 2025)

Name	University	Project Name	Duration
Ayesha Tasawar	Barani Institute of Management Science	Intelligent Text Analysis Using Transformers Model	July-august
Laraib Hafeez	Comsats University Islamabad	Ai-driven Intelligent Management Of 5g networks	July-august
Adan Talat	Air University	Project TiML Based Detection of Security Vulnerabilities in Ethereum Smart	July-august
Emaan Shehzadi	Rawalpindi Woman University	Al Based Phishing Email Detector	July-august
Sibt e Hassan	Ripah University	Fire Detection for Edge Devices	July-august
Areeba	Comsats University Islamabad	Ai-driven Intelligent Management Of 5G networks	July-august
Shahzaib	PIEAS	Critical Heat Flux Predictions	July-august