Department of Data Science
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Faculty of Computing and Information Technology
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Quaid-i-Azam (New) Campus
Lahore, 54000, Pakistan
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Research Interests	Image processing, computer vision, machine learning, data science, statistical inference, and virtual reality.
Current Position	Tenured Associate Professor Computer Science Department of Data Science Faculty of Computing and Information Technology (FCIT) University of the Punjab (PU), Quaid-i-Azam (New) Campus, Lahore, Pakistan. 3 May 2021 - Present.
Previous Position	Assistant Professor on Tenure Track System (TTS) Computer Science Punjab University College of Information Technology (PUCIT) University of the Punjab (PU), Quaid-i-Azam (New) Campus, Lahore, Pakistan. 7 March 2014 - 2 May 2021.
Previous Position	Assistant Professor on Interim Placement of Fresh PhD's (IPFP) Computer Science Punjab University College of Information Technology (PUCIT) University of the Punjab (PU), Quaid-i-Azam (New) Campus, Lahore, Pakistan. 17 January 2013 - 6 March 2014.

Education	**Asian Institute of Technology, Thailand**

Asian Institute of Technology, Thailand
Ph.D., Computer Science, Dec 2012.
Thesis: Automatic Radial Distortion Estimation from a Single Image.

Asian Institute of Technology, Thailand
M.S., Computer Science, 2009.
Thesis: Delaunay Triangulation Based Sparse 3D Reconstruction of Indoor Scenes Using a Monocular Camera.

Major Graduate Courses:
Selected Topic: Machine Vision for Robotics and HCI
Image Processing
Pattern Recognition and Image Processing
Digital Image Processing in Remote Sensing
AI and Neuro Fuzzy Theory
Selected Topic: Machine Learning
Deterministic Optimization Models
Statistical Models and Design of Experiments

Punjab University College of Information Technology, Lahore, Pakistan
M.Sc., Computer Science, 2005.
Final Year Project: Wireless Result System of the Punjab University College of Information Technology (PUCIT).
One year specialization in Telecommunications and Networking, 2005–2006.

Institute of Statistics, University of the Punjab, Lahore, Pakistan
M.Sc., Statistics, 2000.
Project: An examination of the factors contributing to child labor in Lahore Cantonment: A case study.

Honors,	Based on my Matriculation results, I was awarded a government merit scholarship
Awards,	by the Board of Intermediate and Secondary Education (BISE), Rawalpindi,
Grants	spanning from 1991 to 1993, for a duration of two years

Securing the 9th position in the Board of Intermediate and Secondary Education (BISE), Rawalpindi, during the years 1993-95, I was honored with a government merit scholarship for a two-year duration.

Factors contributing to child labor in Pakistan. The report and its presentation secured the first position in the communication skills class during M.Sc (Computer Science) at PUCIT, PU in 2005.

Recipient of the Higher Education Commission (HEC) Pakistan Scholarship for M.S.-leading to Ph.D., spanning five and a half years from 14th Auguest 2007 to 18^{th}December 2012.

Honored to receive the "Emblem of Excellence" during my tenure as President of the Pakistan Students Association (PSA-AIT) from June to December 2009. This honor was bestowed upon me along with a shield, presented by His Excellency Mr. Sohail Mehmood, Ambassador of Pakistan to Thailand.

Higher Education Commisoin (HEC) Startup research grant of 0.432 million (PKR) for the project Radial Distortion Removal and Estimation: A Case Study on Ground and Aerial Robots, 01-04-2015–10-01-2018.

University of the Punjab (PU) research grant of 0.15 million (PKR) for the project titled "Online Automatic Radial Estimation", 2014–2015.

University of the Punjab (PU) research grant of 0.15 million (PKR) for the project titled "Automatic Radial Distortion Estimation using GPU", 2016–2017.

University of the Punjab (PU) research grant of 0.15 million (PKR) for the project titled, "Vision Assistant System for Blinds", 2017–2018.

University of the Punjab (PU) research grant of 0.15 million (PKR) for the project titled, "Deep CNN for Emotion Recognition Using Facial Expressions", 2019–2020.

University of the Punjab (PU) research grant of 0.25 million (PKR) for the project titled, "Predictive Analysis of ASD (Autism Syndrome Disorder) using Machine Learning", 2021–2022.

University of the Punjab (PU) research grant of 0.25 million (PKR) for the project titled, "Predictive Analysis for Early Signs of Dementia", 2022–2023.

Professional Activities	Reviewer SAGE Open July 2018 - Present.
	Reviewer IEEE Access June 2019 - Present.
	Reviewer PeerJ Computer Science June 2023-present.
	Remote Sensing Applications: Society and Environment September 2023-present.
	Reviewer, Frontiers of Information Technology Conference (FIT-2011).
	Program committee, Frontiers of Information Technology Conference (FIT-2012).
	Program committee, Graduate Research Symposium (GRS2015).
	Reviewer, 2nd International Conference on Intelligent Control and Computing (ICICC 2019).
	Reviewer, IEEE International Conference on Robotics and Automation ((ICRA) 2019).
	Reviewer, IEEE International Conference on Robotics and Automation ((ICRA) 2021).
	Program Committee and Reviewer, 5th International Conference on Advancements in Computational Sciences (ICACS 2024).
	Served as a judge at the National Event SoftExpo'16, organized by the PUCIT-ACM Student Chapter (May 21-22, 2016).
	Higher Education Commission (HEC) Approved PhD Supervisor (28 August 2020 –Present).
	Coordinator of the Coursera for Campus Program for PUCIT (4 January 2020 –Present).
	Former Member of the Institute of Electrical and Electronics Engineers (IEEE).
	Degree coordinator, BS Software Engineering Program at PUCIT (13 February 2015 – 13 October 2015).
	M.Phil/Ph.D.Program Degree coordinator at PUCIT, New Campus (01 February 2020 - 01 February 2022).
Technical Expertise	Programming Libraries: OpenCV, GSL, ALGLIB, Levmar, LAPACK, CLAPACK.
	Database Management Systems: MySQL, PostgreSQL.

Professional Development	Completed a one-year computer networks specialization at Punjab University College of Information Technology (PUCIT), University of the Punjab, 2005-2006.
	Attended a six-day workshop titled "Applications of Matlab for Research," organized by the AIT Student Union, Asian Institute of Technology, Thailand, April 2012.
	Completed with distinction the course "Image and Video Processing: From Mars to Hollywood with a Stop at the Hospital," Coursera, March 18, 2013.
	Attended a five-day workshop titled "Indigenous on Campus Training Program for Management Team" at the University of the Punjab, in collaboration with the Higher Education Commission (HEC), Pakistan, December 2014.
	Completed the course "Coursera Administrator Training," Coursera, July 22, 2020.
	Attended a two-day workshop titled "Use of Generative Artificial Intelligence in Higher Education," organized by the Punjab Higher Education Commission (PHEC), Pakistan, May 8-9, 2024.
Taught Courses	**Graduate courses**
	Computer Vision.
	Statistical and Mathematical Methods for Data Analysis.
	Introduction to Statistical Modeling.
	Probability and Statistics for Data Science.
	Undergraduate courses
	Analysis of Algorithms.
	Discrete Structures.
	Linear Algebra.
	Advanced Statistics.
	Probability and Statistics.

Professional History	**Teaching Associate**	August 2012– December 2012.

Professional History

Teaching Associate   August 2012– December 2012.
Introduction to Computer Programming (ICP), UG program of AIT.

Instructor   1 August 2012–14 August 2012.
Research and Teaching Methodology, organized by AIT Consulting and ACECOMS.

Instructor   July 2012.
Tutorial on running MonoSLAM in the Cloud Robtics class of Dr. Matthew N. Daily.

Instructor   22 April 2012–28 April 2012.
Workshop on Applications of MATLAB for Research, organized by AIT Student Union.

Teaching Associate   August 2011–28 January 2012.
Introduction to Computer Programming (ICP), UG program of AIT.

Student Volunteer   August 2012– January 2011.
Virtual Education Project Pakistan (VEPP) initiated by Prof. Dr. Atta ur Rehman and funded by HEC. Facilitating AIT and VEPP in finding the appropriate courses for the program in Pakistan.

Research Assistant   July 2010–December 2010.
Evaluation of university faculty of Pakistan by AIT for finding prospect students.

AIT Student Ambassador to Pakistan   February–March 2010.
Represented AIT at Dawn Education Expo held in Karachi, Lahore, and Islamabad.

Research Assistant   October 2009–March 2010.
Member of Dean, School of Engineering and Technology (SET) team for research publications evaluation of AIT faculty. The team assisted Thai Research Fund (TRF) on the research output of Thai universities.

Graduated Students

Ph.D. Students

Performance-Aware Cloud Resources Management for Microservice-Base Applications, Muhammad Abdullah, 2020.

M.Phil. Students

Analysis of COVID-19-Related Urdu and English Language YouTube Videos, Sibgha Mushtaq, 2023.

Automated Interpretation of Pakistan Sign Language Using Machine Learning Approach, Fazeen, 2023.

Acceleration of digital education in Pakistan during pandemic (COVID-19): A case study based on ML, Hafiz Sajid Ali Kazmi, 2023.

Impact of COVID-19 on Productivity of Software Engineers: A Comparative Analysis of work from home (WFH) and work from office (WFO) environment using Machine Learning, Farhan Amjad Rehan, 2023.

Traditional Learning vs Online Learning: A Case study during Covid-19 based on Machine Learning, Ayesha Ayub, 2023.

Development of Surgical Simulator for Neuroendoscopy using Unity 3D and HTC VIVE, Aimen Fatima, 2022.

Classification of Ocular Diseases through Deep Learning, Maha Naeem, 2022.

Pakistan Sign Language to Natural Language Interpreter, Amina Javid, 2022.

Automated Skin Cancer Segmentation and Classification Based on Deep Learning, Noor Ul Ain, 2022.

Determining Students' Academic Performance Using Machine Learning Technique, Atika Islam, 2022.

Predictive Analysis of Crop Yield using Environmental Parameter, Amna Ali, 2022.

Predictive Analysis for HCV Prognosis, Warda Babar, 2021.

A Predictive Analysis of Impact of Laptop Scheme on IT Undergraduate Student, Arooj Saeed, 2021.

Automatic Driver Alertness Detection using Machine Learning, Hafsa Sidaq, 2021.

Predictive Analysis of Autism Spectrum Disorder (ASD) using Machine Learning, Naurin Farooqi, 2021.

The Impact of Covid-19 on Adoption of E-learning in Pakistan, Rabia Irshad, 2021.

A Study on Detection of Chronic Renal Failure Based on Machine Learning, Usama Pervaiz, 2021.

A Predictive Analysis of student's Online Class readiness during COVID-19 on Machine Learning, Sofia Parveen, 2021.

Machine Learning in Prediction of Non-syndromic Orofacial Cleft in Pakistan, Javeria Qadeer, 2021.

Graduate Students (Cont.)	Design and Development of Training Simulator for Laparoscopic Partial Nephrectomy (LPN) based on HTC Vive and Unity3D, Fareeha Rasheed, 2020.

Automated Diabetic Retinopathy Detection Based on Deep Learning, Hafiz Faraz Tariq, 2020.

Power Management of grid-connected wind Turbine using Adaptive Dynamic Programming, Hareem Afzaal, 2020.

A Predictive Model for Preliminary Indication of Cardiovascular Disease, Ali Haider, 2020.

Neonatal Hearing Impairment: A Predictive Analysis, Maham Alvi, 2020.

Teaching Applied Mathematical Courses in Computer Science: A Computer Science Background Faculty vs. A Pure Mathematics Background Faculty, Muhammad Zeeshan, 2020.

Intelligent Predictive Model for Hepatitis C, Mehreen Shahzadi, 2020.

Perceptions of computer science students and teachers experience of social networks (SNS), a study on Facebook and Google classroom in higher education, Hafiza Tahira Farzand, 2020.

Predictive Analysis of Congenital Heart Defect Prior to Birth, Umme Ammarah, 2020.

Video-based Lectures vs. Traditional Lectures: Evaluating the Impact on Students Learning, Abdul Rehman Talib, 2020.

Comprehensive Examination of Novel Altmetrics Data in Relation to Citation Based Impact: A Case Study in the Field of Information Sciences, Asma Ahmad, 2019.

Pakistan Sign Language Interpreter, Maida Khan, 2019.

Cleft Prior to Birth: A Machine Learning Approach, Numan Shafi, September 2019.

Virtual Reality based Surgical Simulation for Transurethral Resection of Prostate (TURP), Muhammad Yasin Nasir, 2019.

Automatic Crowd Counting based on Still Images using Machine Learning Techniques, Rameez Raja, 2019.

U-Net architecture based Deep Convolutional Neural Network for Multimodal MRI Segmentation, Sibgha Rauf, 2019.

Virtual Reality Based Simulator to Train Medical Doctors to Build Laparoscopic Skills, Ayesha Hoor Chaudhary, 2018.

Unsupervised Identification of Similar Urdu News, Samia Khaliq, 2016.

Arabic News Aggregation and Summarization, Ali Allaith, 2016.

Graduated Students	**Undergraduate Students**
	Enhancing Automated COVID and Pneumonia Diagnosis from Chest X-rays using Convolutional Neural Networks and Transfer Learning, Muhammad Abdullah Shah Bukhari, Muhammad, Sarmad Khalique, Muhammad Ahmad, 2023.
	Detection of Alzheimer's Through AI, Haseeb Raza, Unaiza Nisar, Fatima Noor, Laiba Ahmed, Usama Adil, 2023.
	Predictive Analysis of Breast Cancer Using Machine and Deep Learning, Sajal, Fajar, Muneeba Ashraf, Aleena Tariq, 2023.
	Ocular Disease Recognition Using Deep Learning, Rizwan Asif, Khansa Arshad, Shoaib Zafar, Ahmed Daniyal, Zubia Abbas, 2021.
	Stammering/Stuttering Diagnosis and Therapy System based on Machine Learning, Muhammad Umer Shahid, Sameen Treen, Irda Malik, 2021.
	Vision Based Assistant, Rao Hamza, M Usman, Tatheer Fatima, 2021.
	Dengue Detection Using Machine Learning, Zainab, Hira Ali, Faiza, Zainab, Noor Ul Mava, 2020.
	A Predictive Analysis of Early Signs of Dementia, Kanwal Abbas, Atika Islam, Nimra,Ayesha Pervaiz, Aimen Fatima, 2020.
	Automated Currency Detection for Impaired People Based On Deep Learning, Afnan Bin Tahir, Maryam, Usama Basharat, 2020.
	Deep Learning based Skin Disease Detection, Rabia Majeed, Ayesha Ashraf, Bilal Ehsan, 2020.
	Predictive Model For Early ADHD Detection, Areej Zahoor, Aqsa Riaz, Hira Ali, Manahil Rashid, 2020.
	Automated Psoriasis Detection Using Deep Learning, Dania Asrar, Fatima, Zainab, Nagina Amin, 2020.
	Machine Learning Approach Predicting Persistent Depressive Disorder, M Fahim Ashiq, M Asim, M Ahson Mehmood, M Usman, 2020.
	Voice based Email System, Shoaib, 2019.
	Automatic Emotion Detection using Facial Expressions, Farheea Rafaqat, Azka Saddiqa, Muhammad Naeem Akram, Ali Ahmad, 2019.
	Automatic Retina Disease Detection, Umair, Arsalan, Masam, 2019.
	Dengue Detection Using Machine Learning, Zainab, Hira Ali, Faiza, Zainab, Noor Ul Mava, 2020.
	A Predictive Analysis of Early Signs of Dementia, Kanwal Abbas, Atika Islam, Nimra, Ayesha Pervaiz, Aimen Fatima, 2020.
	Automated Currency Detection For Impaired People Based On Deep Learning, Afnan Bin Tahir, Maryam, Usama Basharat, 2020.

Undergraduate Students (Cont.)	Predictive Model For Early ADHD Detection, Areej Zahoor, Aqsa Riaz, Hira Ali, Manahil Rashid, 2020.
	Automated Psoriasis Detection Using Deep Learning, Dania Asrar, Fatima, Zainab, Nagina Amin, 2020.
	Machine Learning Approach Predicting Persistent Depressive Disorder, Muhammad Fahim Ashiq, Muhammad Asim, Muhammad Ahson Mehmood, Muhammad Usman. 2020.
	Autonomous Navigation of Quadrotor based on SLAM, Kiran khursheed, Nisha Shahbaz, Muhammad Junaid Haris, Matee ullah Malik, Umar Sohail, 2019.
	Automatic Brain Tumor Detection, Rana Arsalan Zaheer, 2019.

Undergraduate Students (Cont.)	Kinect Based Sign Language Recognizer, Aniqa Noor, Bakhtawar, Khadija, Mahnoor, Momina, 2018.

Automated Retina Disease Detection, Shafiqa, M. Tauseeq, Rabee Tasneem, 2018.

Vision Based Attendance System, Hira, Hafiz M. Hussnain, Umair, 2018.

Auto Invigilation, Faiqa, Maida, Saba, Fatima, 2018.

Get Dressed In Virtual Environment, I. M. Junaid, Hunnain, Bilal Pervaiz, Bilal Alam, 2018.

Lung Cancer Detection System Using Image Processing, I.M. Humza, Bilal, Adil, Adeel, 2018.

Autonomous Navigation For Flying Robots, M. Salman, Mustafeez, Usama, Asad, Usama Tariq, 2018.

Online Food Depot (OFD), Arslan, Moazan Ali, Danish Ali, Waleed Ahmad, Farooq, 2018.

Dehari- Service Provider Platform, Shahzad Raza, M. Hasan, Faraz, Adil, Uzair, 2018.

Vision Assistant System for Blinds, M. Bilal Anjum, Usman Aamer, Waleed Shafique, Moeen Ahmed, Mohsin Raza Zaidi, 2017. This project won first prize in the research category of SOFTEC 2017.

Glossophobia Simulator, Amna, Fatima Sana, Sumbal Irfan, 2017.

Medilator Medical Practice Simulator, Umer Jamil Butt, Syed Waleed Tariq, H. Shahan Zafar, Raheel Waqar, 2017. Doctor Operation Practicing Simulator. M. Zaheer Ahsan, M. Abu Huraira, Umar Tariq, 2017.

Parallel Implementation of Radial Distortion using CUDA, Aliza Mubashar, Aliana Umair, Ayesha Rehman, Javeria Qadeer, Shanza Zaib, 2016.

Trespassing Detection, Maidha Khan, Aymen Zameer, Maham Alvi, Hafiza Sania Saleem, 2016.

Efficient Face Detection using OpenCV, Muhammad Usman Khan, 2016. |
| **Current Students** | **Current Ph.D. Students**
Vision Based Detection of Perimeter Scaling Activities in Real Time, Noman Nazar, August 2016–Present.

Cost-effective Dynamic Resource Allocation and Auto-scaling for Microservices, Noman Shafi 2020–Present.

Stutter Detection in Urdu Speech, Umme Ammarah, 2020–Present. |

Publications

Journal Papers

Faisal Bukhari and Matthew N. Dailey , "Automatic Radial Distortion Estimation from a Single Image", *Journal of Mathematical Imaging and Vision, 45(1), 31-45, 2013 (JCR impact factor* 2.330*).*

Muhammad Abdullah, Waheed Iqbal, **Faisal Bukhari**, Abdelkarim Erradi, "Diminishing Returns and Deep Learning for Adaptive CPU Resource Allocation of Containers", *IEEE Transactions on Network and Service Management*, vol. 17, no. 4, 2052-2063, 2020. (JCR impact factor 3.878).

Ayesha Hoor Chaudhary, **Faisal Bukhari**, Waheed Iqbal, Muhammad Kamran Malik, Zubair Nawaz, "Laparoscopic Training Exercises using HTC VIVE", *Intelligent Automation & Soft Computing*, Vol. 26, no. 1, 5359, 2020 (JCR impact factor 0.790).

Numan Shafi, **Faisal Bukhari**, Waheed Iqbal, Muhammad Asif, Zubair Nawaz, "Cleft Prediction Before Birth Using Deep Neural Network", *Health Informatics Journal*, page no 1-18, 2020. (JCR impact factor 2.297).

Muhammad Abdullah, Waheed Iqbal, Arif Mahmood, **Faisal Bukhari**, Abdelkarim Erradi, "Predictive Autoscaling of Microservices Hosted in Fog Micro Data Center", *IEEE Systems Journal*, 2020. (JCR impact factor 4.463).

Fatima Tahir, Muhammad Abdullah, **Faisal Bukhari**, Khaled Mohamad Almustafa, Waheed Iqbal, "Online Workload Burst Detection for Efficient Predictive Autoscaling of Applications", *IEEE Access*, Vol. 8, no. 1, page no: 73730-73745, ISSN: 2169-3536, 2020. (JCR impact factor 4.098).

Zainab Mahmood, Iqra Safder, Rao Muhammad Adeel Nawab, **Faisal Bukhari**, Raheel Nawaz, Ahmed S. Alfakeeha, Naif Radi Aljohani, Saeed-Ul Hassan, "Deep Sentiments in Roman Urdu Text using Recurrent Convolutional Neural Network Model", *Information Processing & Management*, vol. 57, issue no 4, 2020 (JCR impact factor 3.892).

Shahzad Nazir, Muhammad Asif, Shahbaz Ahmad, **Faisal Bukhari**, Muhammad Tanvir Afzal, Hanan Aljuaid, "Important Citation Identification by Exploiting Content and Section-Wise In-text Citation Count", *PLOS ONE*, 15(3), e0228885, 2020. (JCR impact factor 2.776).

Abid Nisar, Waheed Iqbal, Fawaz Bokhari, **Faisal Bukhari**, Khaled Almustafa, "Dynamic Horizontal and Vertical Scaling for Multi-tier Web Applications", *Intelligent Automation & Soft Computing*, Vol. 26, no. 3, 351364, Sept 2020. (JCR impact factor 0.790).

Publications (Cont.)

Journal Papers

Tayyab Ahmad, Muhammad Kamran Malik, Khurram Shahzad, Faisal Aslam, Asif Iqbal, Zubair Nawaz, **Faisal Bukhari**, "Named Entity Recognition and Classification for Punjabi Shahmukhi", *ACM Transactions on Asian and Low-Resource Language Information Processing*, article no. 51, 2020. (JCR impact factor 0.788).

Saeed-Ul Hassan, Aneela Saleem, Saira Hanif Soroya, Iqra Safder, Sehrish Iqbal, Saqib Jamil, **Faisal Bukhari**, Naif Radi Aljohani, Raheel Nawazf, "Sentiment Analysis of Tweets through Altmetrics: A Machine Learning Approach", *Journal of Information Science*, 2020 (JCR impact factor 2.327).

Zain Aftab, Waheed Iqbal, Khaled Mohamad Almustafa, **Faisal Bukhari**, Muhammad Abdullah, "Automatic NoSQL to Relational Database Transformation with Dynamic Schema Mapping", *Scientific Programming*, vol.2020.(JCR impact factor 1.289).

Iqra Safder, Zainab Mahmood, Raheem Sarwar, Saeed-Ul Hassan, Farooq Zaman, Rao Muhammad Adeel Nawab, **Faisal Bukhari**, Rabeeh Ayaz Abbasi, Salem Alelyani, Naif Radi Aljohani, Raheel Nawaz, "Sentiment analysis for Urdu online reviews using deep learning models", *Expert Systems*,Vol. 38, issue no. 8, page no 1-18, 2021. (JCR impact factor 2.587).

Safia Firdous, Rizwan Abid, Zubair Nawaz, **Faisal Bukhari**, Ammar Anwar, Leo Cheng, Saima Sadaf, "Dysregulated Alanine as Potential Predictive Marker of Glioma An Insight from Untargeted HRMAS-NMR and Machine Learning Data", *Metabolites*, Vol. 11, no. 8, pp. 1-20, 2021. (JCR impact factor 3.303) .

Waheed Iqbal, Waqas Ilyas Malik , **Faisal Bukhari**, Khaled Mohamad Almustafa, Zubair Nawaz, Big Data Full-Text Search Index Minimization Using Text Summarization, *Information Technology and Control*, Vol. 50, no 2, pages 375–389, 2021 (JCR impact factor 1.228).

Saad Ahmad Khab, Muhammad Abdullah and Waheed Iqbal, Muhammad Arif Butt, **Faisal Bukhari**, Saeed-Ul Hassan, "Automatic Migration-Enabled Dynamic Resource Management for Containerized Workload", *IEEE Systems Journal*, Vol. 17, no 2, pages 2378–2389, 2023. (JCR impact factor 3.931).

Fareeha Rasheed, **Faisal Bukhari**, Waheed Iqbal, Muhammad Asif, Hafiza Ayesha Hoor Chaudhry, "A low-cost unity-based virtual training simulator for laparoscopic partial nephrectomy using HTC Vive", *PeerJ Computer Science*, 2023. (JCR impact factor 3.8).

Numan Shafi, Muhammad Abdullah, Waheed Iqbal, Abdelkarim Erradi, **Faisal Bukhari**, "Cdascaler: a cost-effective dynamic autoscaling approach for containerized microservices", *Cluster Computing*/, 2024 (JCR impact factor 4.4).

Abdullah Bukhari, **Faisal Bukhari**, Muhammad Asif, Hanan Aljuaid, and Waheed Iqbal, "Improving Automated Diagnosis of COVID-19 and Pneumonia from Chest X-ray Images through Convolutional Neural Networks and Transfer Learning." Submitted to PeerJ Computer Science (Impact Factor: 3.8).

Publications (Cont.)

Journal Papers

Muhammad Abdullah Shah Bukhari, **Faisal Bukhari**, Muhammad Idrees, Syed Ameer Hamza Bokhari, Ashfaq Ahmad, "LectureBuddy: Towards Anonymous, Continuous, Real-time, and Automated Course Evaluation System", *International Journal of Information Sciences and Technologies*, Vol. 5, no 3, 2023.

Faisal Bukhari, Mahrukh Saleem, Rabia Zafar, Waheed Iqbal, Muhammad Idrees, Zubair Nawaz, Saqib Saleem, "QuackFinder: A Probabilistic Approach", *International Journal of Information Sciences and Technologies*, Vol. 54, no 2, 2022.

Muhammad Idrees, Syed Nasir Ali Shah, Waheed Iqba, Shafaat Ahmad Bazaz, **Faisal Bukhari** "Analysis Of Consultation Length In Khyber Pakhtunkhwa", Pakistan, *Journal of Ayub Medical College, Abbottabad: JAMC*, Vol. 33, no 3, pages 424–430, 2021.

Nida Tariq, Iqra Ejaz, Muhammad Kamran Malik, Zubair Nawaz, **Faisal Bukhari**, "Identification of Urdu Ghazal Poets using SVM", *Mehran University Research Journal of Engineering and Technology, vol 38, no 4, pp. 934-944*, 2019.

Rafique, Ayesha, Kamran Malik, Zubair Nawaz, **Faisal Bukhari**, and Akhtar Hussain Jalbani, "Sentiment Analysis for Roman Urdu", *Mehran University Research Journal of Engineering and Technology, vol 38, no 2, pp. 463-470*, 2019.

Muhammad Idrees, Waheed Iqbal, Shafaat Ahmed Bazaz, **Faisal Bukhari**, "An Efficient Greedy Approach for Online Patients to Doctors Assignment in a Telemedicine System",*IJCSNS International Journal of Computer Science and Network Security, Volume 8 No 10, 2016 (ISI, Indexed Journal)*.

Publications   **Conference Papers**

Muhammad Abdullah Shah Bukhari, Muhammad Ahmad Siddiqui, Sarmad Khalique, **Faisal Bukhari**, and Waheed Iqbal. "Enhancing Automated COVID Diagnosis from Chest X-rays using Convolutional Neural Networks and Transfer Learning" in Proceedings of the 5th International Conference on Advancements in Computational Sciences (ICACS). pp. 1-9, 2024.

Hafiz Sajid Ali Kazmi, **Faisal Bukhari**, Waheed Iqbal, "Acceleration of Digital Education in Pakistan during pandemic (COVID-19): A case study based on ML" in proceedings of 2nd International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering (ETECTE), pp. 1-7, 2023.

Farhan Amjad Rehan, **Faisal Bukhari**, Waheed Iqbal, "Impact of COVID-19 on Productivity of Software Engineers: A Comparative Analysis of work from home (WFH) and work from office (WFO) environment using Machine Learning" in proceedings of 2nd International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering (ETECTE), pp. 1-8, 2023.

Anoosha Tanseer, Tooba, Qandeel Fatima, Azka Rathore, **Faisal Bukhari**, "Uncovering Patterns in Plastic Pollution Using Predictive Analysis" in proceedings of International Conference on IT and Industrial Technologies (ICIT), pp. 1-6, 2023.

Mehreen Shahzadi, **Faisal Bukhari**, and, Numan Shafi, "Intelligent Predictive Model for Hepatitis C" in proceedings of International Conference on Artificial Intelligence (ICAI), pp. 7-12, 2023.

Noor Ul Ail, **Faisal Bukhari**, and, Waheed Iqbal, "Automated Skin Cancer Segmentation and Classification based on Deep Learning" in proceedings of International Conference on Computing and Emerging Technologies (ICCET), 2023 (Accepted).

Atiqa Islam, **Faisal Bukhari**, and, Waheed Iqbal, "Determining Student's Online Academic Performance Using Machine Learning Techniques" in proceedings of International Conference on Computing and Emerging Technologies (ICCET), 2023 (Accepted).

Aimen Fatima, **Faisal Bukhari**, and Waheed Iqbal, "Development of Low-Cost Surgical Simulator for Neuroendoscopy using Unity3D and HTC VIVE" in proceedings of 16th International Conference on Open Source Systems and Technologies (ICOSST), pp. 1-6, 2022.

Ali Haider Arif, **Faisal Bukhari**, Aimen Fatima and Waheed Iqbal, "A Predictive Model for Preliminary Indication of Cardiovascular Disease" in proceedings of International Conference on Emerging Trends in Smart Technologies (ICETST), pp. 1-6, 2022.

Esha Aftab, Tayyaba Tariq, **Faisal Bukhari** and Waheed Iqbal, "Impact of COVID-19 on Online Retail in Pakistan" in proceedings of International Conference on Emerging Trends in Smart Technologies (ICETST), pp. 1-6, 2022.

Atika Islam, Nimra Fatima, Aimen Fatima, Ayesha Pervaiz, Kanwal Abbas, **Faisal Bukhari**, Waheed Iqbal, "A Predictive Analysis for Early Signs of Dementia" in proceedings of International Conference on IT and Industrial Technologies (ICIT), pp.1-6, 2022.

Publications (Cont.)

Conference Papers

Muhammad Nadeem, **Faisal Bukhari**, Ali Hussain, "Predicting the Students Involvements and its Impacts on Learning Outcomes Through Online Education During Covid-19" in proceedings of Ankara International Congress on Scientific Research-VII, 2022.

Rana Aurangzaib, Waheed Iqbal, Muhammad Abdullah, **Faisal Bukhari**, Faheem Ullah, Abdelkarim Erradi, "Scalable Containerized Pipeline for Real-time Big Data Analytics" in proceedings of IEEE International Conference on Cloud Computing Technology and Science (CloudCom), pp. 1-6, 2022.

Naurin Farooqi, **Faisal Bukhari**, Waheed Iqbal, "Predictive Analysis of Autism Spectrum Disorder (ASD) using Machine Learning" in proceedings of International Conference on Frontiers of Information Technology (FIT), pages 305–310, 2021.

Hafsa Sidaq, **Faisal Bukhari**, Waheed Iqbal, "Automatic Driver Alertness Detection using Machine Learning" in proceedings of International Conference on Robotics and Automation in Industry (ICRAI), 2021, pp. 1-6.

Umm-e-Ammarah, **Faisal Bukhari**, Muhammad Idrees, Waheed Iqbal, "Predictive Analysis of Congenital Heart Defects Prior to Birth" in proceedings of International Conference on Robotics and Automation in Industry (ICRAI), 2021, pp. 1-6.

Asma Ahmad, **Faisal Bukhari**, Kamran Malik, "Predicting Article Sentiment Analysis Impact in Twitter: A Case Study in the Field of Information Sciences" in proceedings of International Conference on Innovative Computing (ICIC), 2021, pp. 1-6.

Usama Pervaiz, **Faisal Bukhari**, Waheed Iqbal, "A Study on Detection of Chronic Renal Failure Based on Machine Learning" in proceedings of International Conference on Innovative Computing (ICIC), 2021, pp. 1-10.

Javeria Qadeer, **Faisal Bukhari**, Waheed Iqbal, "Machine learning in the prediction of nonsyndromic Orofacial Cleft in Pakistan" in proceedings of International Conference on Innovative Computing (ICIC), 2021, pp. 1-6.

Muhammad Abdullah, Waheed Iqbal, Abdelkarim Erradi, **Faisal Bukhari**, "Learning Predictive Autoscaling Policies for Cloud-hosted Microservices Using Trace-driven Modeling" in proceedings of 11th IEEE International Conference on Cloud Computing Technology and Science (CloudCom), PP. 119-226, 2019, Sydney, Australia.

Muhammad Ali Raza, Muhammad Usama, Waheed Iqbal, **Faisal Bukhari**, "Secure NoSQL Over Cloud Using Data Decomposition and Queryable Encryption" in proceedings of International Conference on Intelligent Technologies and Applications (INTAP'19), October, 2019.

Rasheed Rashid, Ahmed Asma, **Faisal Bukhari**, "A survey base study about the effectiveness of smart home applications in Pakistan" in proceedings of International Conference on Engineering and Emerging Technologies (ICEET), February, 2018.

Hassan Nazeer, Waheed Iqbal, Fawaz Bokhari, **Faisal Bukhari**, Shuja-Ur-Rehman Baig, "Real-time Text Analytics Pipeline Using Open-source Big Data Tools" in proceedings of 4th International Conference on Big Data Innovations and Applications, August, 2018.

**Publications
(Cont.)**

Conference Papers

Waqar Haider, Waheed Iqbal, Fawaz S. Bokhari, **Faisal Bukhari**, "On Providing Response Time Guarantees to a Cloud-Hosted Telemedicine Web Service" in proceedings of Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST), volume 167, pp 234-243, Springer International Publishing, May, 2016.

M. Khalid, I. Muzaffar, K. Shahzad, **Faisal Bukhari** (2016), "Process Model Searching: A Corpus of Summary Textual Descriptions" in proceedings of International Conference on Innovative Computing, Lahore, Pakistan.

Samia Khaliq, Waheed Iqbal, **Faisal Bukhari**, Kamran Malik, "Clustering Urdu News Using Headlines" in proceedings of 6th International Conference on Language and Technology 16 (CLT16), Lahore, Pakistan.

Abid Nisar, Waheed Iqbal, Fawaz Bokhari, **Faisal Bukhari**, "Hybrid Auto-scaling of Multi-tier Web Applications: A Case of Using Amazon Public Cloud" in proceedings of 4th International Conference on Internet Applications, Protocols, and Services (2015), Cyberjaya, Malaysia.

Faisal Bukhari and Matthew N. Dailey, "Robust Radial Distortion from a Single Image"in Proceedings of 6th International Symposium on Visual Computing, published by Springer-Verlag in LNCS, 2010.

Faisal Bukhari, Delaunay Triangulation Based Sparse 3D Reconstruction of Indoor Scenes Using a Monocular Camera, Master thesis, Computer Science and Information Management, AIT, Thailand.

**Talks and
Posters**

Faisal Bukhari, "Robust Radial Distortion from a Single Image." Oral presentation at 6th International Symposium on Visual Computing (ISVC 10) Las Vegas, Nevada, USA on November 29, 2010.

Faisal Bukhari, "Automatic Plumbline Based Radial Distortion Estimation." Invited speaker at the PUCIT-Association for Computing Machinery (ACM) Chapter on January 18, 2013.

Faisal Bukhari, "Research and Teaching Methodology." Invited resource speaker by AIT Consulting and ASECOMS from August 1 to August 14, 2012.

Faisal Bukhari, "Automatic Plumbline Based Radial Distortion Estimation." Invited speaker at the PUCIT-Association for Computing Machinery (ACM) Chapter on January 18, 2013.

Muhammad Abdullah Shah Bukhari, Muhammad Ahmad Siddiqui, Sarmad Khalique, **Faisal Bukhari**, and Waheed Iqbal, "Enhancing Automated COVID Diagnosis from Chest X-rays using Convolutional Neural Networks and Transfer Learning." Oral presentation at 5th International Conference on Advancements in Computational Sciences (ICACS 2024) on February 19-20, 2024.

Extra-curricular Activities

Administrator of the Coursera for Campus Program for PUCIT (Punjab University College of Information Technology), University of the Punjab (PU). April 2020—Present.

Chairman FCIT (Faculty of Computing and Information Technology), Sports Society.   June 2013 – Present.

President, Pakistan Students Association (PSA), AIT (PSA-AIT).   June 2009–January 2010.

Cricket Lead, AIT International School Afterschool Activities Session 2-Semester 2 .   March to May School Year 2010-2011.

3rd place, Men's Open Marathon held at AITIS Ground, Thailand.   22nd September 2011.

PSA-AIT HEC (Higher Education Commission) coordinator.   August 2009–December 2012.

Man of the match in the final match between AIT and Bangkok Stars in the Bangkok Cricket League (BCL), A1 Division.   September 2010–June 2011.

General assembly (GA) member of the AIT Student Union. August 2008, January 2009, August 2009, August 2011, January 2012, August 2012 semesters.

Participated in the drama competition organized by AIT-SU in the annual cultural show.   January 2009 semester.

Permanent member of the AIT cricket team, who participated in the Bangkok Cricket League (BCL), under the banner of Cricket Association of Thailand (CAT). August 2007–December 2012.

Skipper of the cricket team of the Institute of Statistics, University of the Punjab.   1998–2000.

Participated in skit writing and drama competition organized by the University of the Punjab.   1998–2000.

Regular Blood Donor.

Regular Member, Punjab International Swimming Complex (PISC), Lahore, Pakistan (2020Present); actively engage in gym and swimming activities.

Enthusiast and breeder of various parrot species, including different mutations of ring necks, Alexandrine, and love birds.

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