

# Sajid Iqbal

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Approved Ph.D. supervisor by HEC Pakistan



## Professional Experience

Experience	Courses Taught and Contributions
<b>Assistant Professor</b> (Jan. 2023 – Date) Department of Information Systems, King Faisal University, Al-Ahsa, Saudi Arabia	<ul style="list-style-type: none"><li>Rapid Application Development (UG)</li><li>Object Oriented Programming Using Java (UG)</li><li>Design and Implementation of Datawarehouse (G)</li></ul>
<b>Assistant Professor</b> (Sep. 2010 – Dec. 2012) <b>Assistant Professor</b> (July. 2018 – Dec. 2022)  Department of Computer Science Bahauddin Zakariya University, Multan, Pakistan	<b>Under Graduate Courses</b> Introduction to Computing      Digital Image Processing Computer Programming      Design and Analysis of Algorithms Web Programming      Computer Organization and Assembly Language  <b>Graduate Courses</b> Machine Learning      Tools and Technologies in Data Science Digital Image Processing <b>Contributions</b> <ul style="list-style-type: none"><li>Established a research lab. At Department</li><li>Initiated and materialized Master of Science in Data Science Program at Department</li><li>Worked as Manager Incubation Center at University</li><li>Served as MSDS program coordinator.</li><li>Supervised undergraduate final year projects.</li><li>Supervised MSCS and Ph.D research thesis</li></ul>
<b>Director IT</b> (Apr. 2008 – Sept. 2010), Bahauddin Zakariya University, Multan, Pakistan	<ul style="list-style-type: none"><li>Managed university IT services and infrastructure</li><li>Coordinated Campus Management System Development Project</li></ul>
<b>Assistant Professor</b> (Aug. 2006 – Apr. 2008), Department of Computer Science, Virtual University of Pakistan, Lahore, Pakistan	<ul style="list-style-type: none"><li>Developed a student final year projects supervision section.</li><li>Initiated and managed first international electronic and distance learning conference (ELDEC 2007)</li><li>Initiated and materialized Master of Science in Computer Science (MSCS) program at the university</li><li>Supervised student final year projects</li><li>Taught online courses using LMS and Video content delivery methods.</li></ul>
<b>Manager MIS</b> (Aug. 2005 – Aug. 2006), Bahauddin Zakariya University, Multan, Pakistan	<ul style="list-style-type: none"><li>Developed Part Time teaching management system.</li><li>Played a role in organizing a women conference in 2006.</li><li>Played a role in developing university 2020 vision</li></ul>
<b>System Engineer</b> (Aug. 2004 – Aug. 2005), RFM Loyalty (Pvt) Ltd., Lahore, Pakistan.	<ul style="list-style-type: none"><li>Established and managed local area network for the organization office in Lahore, Pakistan</li><li>Designed and managed Loyalty campaigns for merchants in association with United Bank Pvt. Ltd. Pakistan.</li></ul>

<b>Lecturer</b> (July. 2002 – Aug. 2003), Punjab College of Information Technology, Multan, Pakistan	<b>Courses Taught and other responsibilities:</b> <ul style="list-style-type: none"> <li>○ Computer Programming, Algorithms Analysis and Design, Object Oriented Programming</li> <li>○ Student Final Year Projects supervision</li> </ul>
<b>Online Teaching</b>	<ul style="list-style-type: none"> <li>● Almost 2-years teaching and management experience at Virtual University of Pakistan</li> <li>● Running a YouTube channel in Urdu language named “Comedxd”.</li> </ul>

## Education:

<i>Degree</i>	<i>Institute</i>
<b>Ph.D (Computer Science )</b> <b>Specialization:</b> Artificial Intelligence Jan. 2020	Department of Computer Science University of Engineering and Technology, Lahore, Pakistan. <b>Research Training:</b> One year at Center for Research in Computer Vision at University of Central Florida, Orlando, USA.
<b>Master of Science in Computer Science</b> MScS (2003 - 2005)	Department of Computer Science National University of Computer and Emerging Sciences (NUCES), Lahore, Pakistan.
<b>Bachelor’s in computer sciences</b> <b>Honors.</b> BCS. Hons. (1997 - 2002)	Department of Computer Science Bahauddin Zakariya University, Multan, Pakistan.

## Research Supervision

### Significant MScS Thesis Supervision

S#	Thesis Title
1	Muhammad Awais, <b>Urdu OCR character recognition using machine learning</b>
2	Fatima Yousuf, <b>Development of multi-class disease detection framework based on hybrid data for human brain</b>
3	Abbas Mubarak, <b>Design of Resource Efficient sorting technique</b>
4	Mehreen Tariq, <b>Breast Cancer Detection, Grading and Classification</b>
5	Hareem Ayesha, <b>Computer aided deep image captioning for medical images</b>
6	Abdul Jabbar, <b>Developing the rule based stemming methods for Urdu language</b>
7	Searage Din, <b>Mango disease detection using machine learning methods</b>

### Ph.D thesis Research Supervision

S#	Thesis	Status
1	Abdul Jabbar, <b>Design and Development of Text Stemming Algorithms for the Urdu Language</b>	Completed, Comsats Islamabad, Pakistan
2	Iqra Iqbal, <b>Radiological Information Extraction Using Natural Language Modelling</b>	in progress, BZU, Multan, Pakistan

3	Tanzila Kausar, <b>Design a framework for automated extraction of ischemic, haemorrhagic and watershed stroke information from medical images of the brain region</b>	In progress UTM Malaysia
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### Books:

1. Sajid Iqbal, "Introduction to Programming using C#". Book for undergraduate students (E-book) (<https://github.com/sajjo79/Fundamentals-of-Programming-Using-C->)
2. Sajid Iqbal, "Digital Image Processing Laboratory using Python and OpenCV". (In progress)
3. <https://github.com/sajjo79/DigitalImageProcessing>
4. Sajid Iqbal, "Digital Image Processing" (Practical Book) (in progress)

### Invited Talks:

- Invited Speaker, 1st International Conference IT Infrastructure and Computational Security (ITICS) on 26 and 27 April 2023, Lahore Garrison University, Lahore, Pakistan.
- Keynote Speaker, 1ST International Conference on Machine Perception & Artificial Intelligence, Islamia University, June, 17, 2022, Bahawalpur, Pakistan

### Book Chapters:

1. **Iqbal, Sajid**, Hareem Ayesha, Muhammad Farooq Khan Niazi, Noor Ayesha, and Khawaja Tehseen Ahmad. "COVID-19 Prediction, Diagnosis and Prevention Through Computer Vision." In *Prognostic Models in Healthcare: AI and Statistical Approaches*, pp. 79-113. Springer, Singapore, 2022.
2. Hassan, Syed Ale, Sahar Gull, Shahzad Akbar, Israr Hanif, **Sajid Iqbal**, and Muhammad Waqas Aziz. "Artificial intelligence in coronavirus detection: recent findings and future perspectives." *Intelligent Computing Applications for COVID-19* (2021): 23-48.
3. Yar, Hikmat, Naveed Abbas, Tariq Sadad, and **Sajid Iqbal**. "Lung nodule detection and classification using 2D and 3D convolution neural networks (CNNs)." *Artificial Intelligence and Internet of Things* (2021): 365-386.
4. **Iqbal, Sajid**, Mehreen Tariq, Hareem Ayesha, and Noor Ayesha. "AI technologies in health-care applications." In *Artificial Intelligence and Internet of Things*, pp. 3-44. CRC Press, 2021.

### Journal Publications: (CIF: 72.279)

1. "Applications of Deep Learning algorithms in Ischemic stroke detection, segmentation and classification", Journal of Artificial Intelligence Review ([Minor Revision Submitted](#))
2. Jabbar A, Illahi M, **Iqbal S**, Khan AR, ElHakim N, Saba T. PWMStem: **A Corpus-Based Suffix Identification and Stripping Algorithm for Multi-lingual Stemming**. Journal of Advances in Information Technology. 2023;14(4).
3. Hussain SK, Haider A, Alrashidi M, **Iqbal S**, Ilyas QM, Shah K "Deep Learning for Ophthalmic Disease Identification Using a New Concoction Loss Function", Computers, Materials and Continua (CMC) 2023 ([IF 3.1](#))

4. Mehmood A, Gulzar Y, Ilyas QM, Jabbari A, Ahmad M, **Iqbal S**. **SBXception: A Shallower and Broader Xception Architecture for Efficient Classification of Skin Lesions**. *Cancers*. 2023 Jul 13;15(14):3604. (IF 5.2)
5. Shoukat A, Akbar S, Hassan SA, **Iqbal S**, Mehmood A, Ilyas QM. **Automatic Diagnosis of Glaucoma from Retinal Images Using Deep Learning Approach**. *Diagnostics*. 2023 May 14;13(10):1738. (IF 2.489)
6. Yousaf F, **Iqbal S**, Fatima N, Kousar T, Rahim MS. **Multi-class disease detection using deep learning and human brain medical imaging**. *Biomedical Signal Processing and Control*. 2023 Aug 1;85:104875. (IF 5.076)
7. Rehman MU, Shah K, Haq IU, **Iqbal S**, Ismail MA, Selimefendigil F. **Assessment of Low-Density Force Myography Armband for Classification of Upper Limb Gestures**. *Sensors*. 2023 Mar 1;23(5):2716. (IF 2.55)
8. Mubarak A, **Iqbal S**, Naeem T, Hussain S. **2 mm: A new technique for sorting data**. *Theoretical Computer Science*. 2022 Apr 2;910:68-90.. (IF 0.827)
9. Khan AR, Khan S, Harouni M, Abbasi R, **Iqbal S**, Mehmood Z. **Brain tumor segmentation using K-means clustering and deep learning with synthetic data augmentation for classification**. *Microscopy Research and Technique*. 2021 Jul;84(7):1389-99. (IF 2.11)
10. Ayesha H, **Iqbal S**, Tariq M, Abrar M, Sanaullah M, Abbas I, Rehman A, Niazi MF, Hussain S. **Automatic medical image interpretation: State of the art and future directions**. *Pattern Recognition*. 2021 Jun 1;114:107856.. (IF 7.196)
11. Ahmed KT, Aslam S, Afzal H, **Iqbal S**, Mehmood A, Choi GS. **Symmetric image contents analysis and retrieval using decimation, pattern analysis, orientation, and features fusion**. *IEEE Access*. 2021 Apr 7;9:57215-42. (IF 3.476)
12. Tariq M, **Iqbal S**, Ayesha H, Abbas I, Ahmad KT, Niazi MF. **Medical image based breast cancer diagnosis: State of the art and future directions**. *Expert Systems with Applications*. 2021 Apr 1;167:114095. (IF 5.452)
13. Ramzan F, Khan MU, **Iqbal S**, Saba T, Rehman A. **Volumetric segmentation of brain regions from MRI scans using 3D convolutional neural networks**. *IEEE Access*. 2020 Jun 1;8:103697-709. (IF 4.098)
14. Jabbar A, **Iqbal S**, Tamimy MI, Hussain S, Akhuzada A. **Empirical evaluation and study of text stemming algorithms**. *Artificial Intelligence Review*. 2020 Dec;53:5559-88. (IF 5.195)
15. Ramzan F, Khan MU, Rehmat A, **Iqbal S**, Saba T, Rehman A, Mehmood Z. **A deep learning approach for automated diagnosis and multi-class classification of Alzheimer's disease stages using resting-state fMRI and residual neural networks**. *Journal of medical systems*. 2020 Feb;44:1-6. (IF 2.415)
16. **Iqbal S**, Ghani Khan MU, Saba T, Mehmood Z, Javaid N, Rehman A, Abbasi R. **Deep learning model integrating features and novel classifiers fusion for brain tumor segmentation**. *Microscopy research and technique*. 2019 Aug;82(8):1302-15.. (IF 1.327)
17. Tahir B, **Iqbal S**, Usman Ghani Khan M, Saba T, Mehmood Z, Anjum A, Mahmood T. **Feature enhancement framework for brain tumor segmentation and classification**. *Microscopy research and technique*. 2019 Jun;82(6):803-11. (IF 1.327)
18. Jabbar A, **Iqbal S**, Akhuzada A, Abbas Q. **An improved Urdu stemming algorithm for text mining based on multi-step hybrid approach**. *Journal of Experimental & Theoretical Artificial Intelligence*. 2018 Sep 3;30(5):703-23. (IF 2.111)

19. Fahad HM, Ghani Khan MU, Saba T, Rehman A, **Iqbal S**. **Microscopic abnormality classification of cardiac murmurs using ANFIS and HMM**. Microscopy research and technique. 2018 May;81(5):449-57. (IF 1.327)
20. **Iqbal S**, Ghani MU, Saba T, Rehman A. **Brain tumor segmentation in multi-spectral MRI using convolutional neural networks (CNN)**. Microscopy research and technique. 2018 Apr;81(4):419-27.. (IF 1.327)
21. Jabbar A, **Iqbal S**, Khan MU, Hussain S. **A survey on Urdu and Urdu like language stemmers and stemming techniques**. Artificial Intelligence Review. 2018 Mar;49:339-73. (IF 5.095)
22. **Iqbal S**, Khan MU, Saba T, Rehman A. **Computer-assisted brain tumor type discrimination using magnetic resonance imaging features**. Biomedical Engineering Letters. 2018 Feb;8(1):5-28. (IF 3.920)
23. **Iqbal S**, Altaf W, Aslam M, Mahmood W, Khan MU. **Application of intelligent agents in health-care**. Artificial Intelligence Review. 2016 Jun;46:83-112.. (IF 5.095)
24. Ahmed KT, Afzal H, **Iqbal S**, Hussain MG, Mufti MR, Karim A. **Highly Efficient Multimedia Image Retrieval using Slim Descriptor**. The Nucleus. 2020;57(4):118-28.
25. Hussain Z, **Iqbal S**, Saba T, Almazyad AS, Rehman A. **DESIGN AND DEVELOPMENT OF DICTIONARY-BASED STEMMER FOR THE URDU LANGUAGE**. Journal of Theoretical & Applied Information Technology. 2017 Aug 15;95(15).
26. Riaz S, S Khurshid K, **Iqbal S**, Hussain S, Safdar Z. **Automated Semantic Segmentation of Brain Tumors using Modified UNet Architecture**. International Journal of Computing and Digital System. 2021 Aug 2.
27. Hussain S, Farid S, Alam M, **Iqbal S**, Ahmad S. **Modeling of access control system in event-B**. The Nucleus. 2018 Oct 11;55(2):74-84.
28. Hussain S, Kamal A, Ahmad S, Rasool G, **Iqbal S**. **Threat modelling methodologies: a survey**. Sci. Int.(Lahore). 2014;26(4):1607-9.
29. Mubarak A, **Iqbal S**, Rasool Q, Asghar N, Faujdar N, Rauf A. **Preprocessing: A method for reducing time complexity**. Journal of Computing & Biomedical Informatics. 2022 Dec 29;4(01):104-17.
30. Israr S, Tariq M, **Iqbal S**, Rasool Q, Asghar N. **A Data Driven Approach for Automated Risk Assessment and Survival Prediction of Coronavirus Using Artificial Neural Networks**. Journal of Computing & Biomedical Informatics. 2022 Sep 27;3(02):21-31.
31. Asghar MN, Saleemi FJ, **Iqbal S**, Chaudhry MU, Yasir M, Bazai SU, Khan MQ. **A novel parts of speech (pos) tagset for morphological, syntactic and lexical annotations of saraiki language**. Journal of Applied and Emerging Sciences. 2021 Jun 8;11(1):pp-77..
32. **Iqbal S**, Khan M, Memon I. **A comparative study of garbage collection techniques in java virtual machines**. Sindh University Research Journal-SURJ (Science Series). 2012 Dec 15;44(4).
33. Maqbool MS, Hanif I, **Iqbal S**, Basit A, Shabbir A. **Optimized Feature Extraction and Cross-Lingual Text Reuse Detection using Ensemble Machine Learning Models**. Journal of Computing & Biomedical Informatics. 2023 Jun 5;5(01):26-40.

## Conference Publications:

34. Nadeem M, Afzal H, Idrees M, **Iqbal S**, Asim MR. A Review Of Progress for Component Based Software Cost Estimation From 1965 to 2023. arXiv preprint arXiv:2306.03971. 2023 Jun 6.
35. **Sajid Iqbal**, Abdul Jabbar 2016. **Recognizing Urdu Compound Words**. 2nd International Conference of the Linguistic Association of Pakistan 2016. Held at University of Punjab, Lahore, Pakistan.
36. Jabbar, A., **Iqbal, S**. and Khan, M.U.G., 2016. **Analysis and development of resources for Urdu text stemming**. *Language and Technology*, 1. University of Engineering and Technology, Lahore, Pakistan.
37. **Iqbal. S.**, Shahbaz M. Waqar M. "**Data Mining Based Decision Support System for Students.**" 1st International Young Engineers Convention at UET Lahore, 18-20 April, 2014.

## References

- Prof. Dr. Waqar Mahmood, Professor, Al-Khawarzmi Institute of Computer Sciences, University of Engineering and Technology, Lahore. [director@kics.edu.pk](mailto:director@kics.edu.pk)
- Prof. Dr. Usman Ghani Khan, Professor, Department of Computer Science and Engineering, University of Engineering and Technology, Lahore, Pakistan. [usmanghanikhan@gmail.com](mailto:usmanghanikhan@gmail.com)
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