

Engr. Dr. Saba Bashir

(PEC Registration # COMP/09128)

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CAREER OBJECTIVE

Holding a PhD degree specialization in Artificial Intelligence, I have 18+ years' professional experience serving in various academic, research and management positions at prestigious national universities. I am a certified engineer from Pakistan Engineering Council with a proven track record of research publications in top-tier ISI-Indexed impact factor journals and international conferences resulting in a personal impact factor of 150+ and 2500+ citations. Leveraging my expertise and experience, I am dedicated to enhancing professional standards and equipping students with the essential skills, knowledge, attitude, and respect for time necessary for success.

PROFESSIONAL RECOGNITION & SCHOLARLY CONTRIBUTIONS

- **HEC Approved PhD Supervisor**
- **Training**, Capacity Building Training Program on Open and Distance Learning (ODL), HEC, Dec 2025
- **Invited Speaker & Guest**, 23rd International Conference on Artificial Intelligence in Higher Education, Beirut, Lebanon, Nov 2025
- **Training**, Implementation of Outcome-Based Education (OBE) in Its True Essence at HEC Islamabad, June 2026
- **Software Engineering & Artificial Intelligence Society Incharge**, Conducted Sports Gala Events in SE Department, Federal Urdu Uni of Arts, Sciences & Technology, May 2025
- **Appreciation Award**, In recognition of Exceptional Support, Open house, Islamic International University, Islamabad, May 2025
- **Training** at National Faculty Development Program for Higher Education Faculty Tier-II, NAHE, HEC Islamabad, Apr 2025
- **Invited Speaker & Guest**, 22nd International Conference on Artificial Intelligence in Higher Education, Beirut, Lebanon, Apr 2025
- **Invited Speaker & Guest**, Cyber Security Conference 2025, Information Technology & Skills Institute, Sultana Foundation, Islamabad, Feb 2025
- **Participant**, The Art of Teaching Programming and Quality of IT Graduate Seminar, NCEAC, HEC, Jan 2025
- **Reviewer and Technical Committee Member**, 19th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, Pakistan, 2022
- **Reviewer**, 2nd IEEE International Conference on Digital Features and Transformative Technologies (ICoDT2 2022)
- **Guest Editor**, Wireless Communications and Mobile Computing, Hindawei, 2021
- **Program Committee Member**, 18th International Conference on Frontiers of Information Technology (FIT 2021)
- **Technical Committee Member and Session Chair**, 17th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, Pakistan, 2020
- **Invited Speaker and Session Chair**, 16th International Bhurban Conference on Applied

Sciences and Technology (IBCAST), Islamabad, Pakistan, 2019

- **Invited Speaker and Session Chair**, 15th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, Pakistan, 2018
- **P@SHA Gold Award 2017** for presenting Best Solution across Pakistan in Research & Development Category
- **APICTA Awards 2017**, Nominated from Pakistan in Research & Development Category
- **Best Paper Award 2017**, Federal Urdu University of Arts, Science & Technology, Isb
- **HEC Best Research Paper Award 2015-2016** (ISI-Indexed Journal), HEC, Pakistan
- Received 17 financial awards from National University of Sciences & Technology (NUST) for publishing research articles in top-tier ISI-Indexed impact factor journals.
- **External Examiner** at various universities for evaluating graduate and undergraduate thesis and projects

ADMINISTRATIVE RESPONSIBILITIES AT FUUAST

- **Incharge Campus, Islamabad [July 2025- Mar 2026]**
 - Oversee day-to-day academic and administrative operations of the campus.
 - Coordinate between departments to ensure smooth delivery of academic programs.
 - Supervise faculty and administrative staff, providing guidance and performance evaluations.
 - Implement institutional policies, ensuring compliance with regulatory standards.
 - Manage campus resources, infrastructure, and facilities to support student learning.
 - Liaise with the other campuses and higher management on strategic initiatives and reporting.
 - Organize events, academic activities, and community outreach programs.
- **Chairperson Software Engineering Department [Oct 2023- Till date]**
 - Established the Department of Software Engineering & Artificial Intelligence from the ground up, including infrastructure, curriculum design, and faculty recruitment.
 - Successfully initiated and launched undergraduate programs “Software Engineering” and “Artificial Intelligence” in alignment with academic and industry standards.
 - Provide academic leadership and strategic direction for departmental growth, research initiatives, and program development.
 - Supervise faculty, ensure quality teaching practices, and oversee curriculum review and enhancement processes.
 - Foster collaboration with industry partners and academic institutions to enrich student learning and research opportunities.
 - Manage departmental budgets, resource allocation, and compliance with institutional and accreditation bodies.
 - Organize departmental events, workshops, and seminars to promote professional development and student engagement.
- **Society Incharge, Software Engineering & Artificial Intelligence Society**
- **Convener Medical Committee:** Verification of medical cases by having frequent meetings
- **Convener Unfair Means Committee:** Verification and Decisions of unfair means cases in final exams
- **Convener Research Verification Committee:** Verification of research papers of faculty members for university remuneration
- **Convener Committee:** Inspection of Installation of AC for Return of retention Money

- **Convener Inquiry Committees:** Convener of inquiry committees formed to resolve different level issues
- **Convener Purchase Committee:** Verification of Quotations and other documents on time to time basis (till 2023)
- **Convener PhD (CS) Program Initialization Committee:** Prepared and submitted the case to HEC for PhD program
- **Chairperson, Board of Studies (SE Department):** Assessment of academic matters of department level
- **Member, Board of Faculty:** Discussions and performing decisions on matters related to different departments
- **Member, Academic Council: Evaluation of academic matters at institute level**
- **Member Advisory Board Vice Chancellor:** Having frequent meetings for resolving the institute level issues
- **Member House Ceiling Committee:** Verification of cases related to house ceilings
- **Member Land Purchase Committee:** Assessments of issues related to lands and infrastructure
- **MS/PhD Coordinator (CS Department):** Coordinates with MS/PhD students for their academic activities (2021-2023)
- **Member Bait-ul-Maal Committee:** Conducting students interviews and evaluate them for Bait-ul-Maal scholarships in each semester
- **Member Ehsaas Scholarship Committee:** Conducting Ehsaas scholarship interviews in each semester
- **Convener Course folder Committee:** Evaluating course folders for undergraduate courses for NECEAC accreditation
- **Member Department Research Committee (DRC):** Conducting DRC meetings with other members on time to time basis for evaluation of MS research
- **Theses and Research Supervision and Project Evaluation:** MS and BS theses and research meetings with students and BS Projects Supervision and Evaluation
- **President and Deputy President in Examinations:** Performing the duty as deputy president in exams on time to time basis

PROFESSIONAL MEMBERSHIPS

- Pakistan Engineering Council (**PEC Registration # COMP/09128**)

PROFESSIONAL EXPERIENCE

- **Associate Professor at Federal Urdu University of Arts, Science & Technology, FUUAST, Islamabad**
(June 2022 – Present)
 - Teaching both postgraduate and undergraduate students
 - Supervising final year projects of undergraduate students
 - Mentoring postgraduate student's thesis research
 - Authoring/reviewing research papers and books
 - Mentoring graduate/undergraduate students for research projects
- **Assistant Professor at Federal Urdu University of Arts, Science & Technology, FUUAST, Islamabad**
(Nov 2010 – June 2022)
 - Teaching both postgraduate and undergraduate students
 - Supervising final year projects of undergraduate students
 - Mentoring postgraduate student's thesis research
 - Authoring/reviewing research papers and books
 - Mentoring graduate/undergraduate students for research projects

- **Lecturer at Federal Urdu University of Arts, Science & Technology, FUUAST, Islamabad (Nov 2008 – Nov 2010)**

- Teaching undergraduate students
- Supervising final year projects of undergraduate students
- Authoring/reviewing research papers and books

RESEARCH INTERESTS

- Artificial Intelligence, Data Science, Natural Language Processing, Machine Learning, Healthcare and Bioinformatics

RESEARCH FUNDINGS

- 2 projects of PKR 0.15 Million each from NESCOM Research & Academia Coordination
- 3 research projects of PKR 0.75 Million each from University of Jeddah, Saudi Arabia
- Industry Academia Collaboration Project of PKR 10 Million, ACTIM Solutions, Islamabad
- Research Funding of PKR 1 Million from Arab Academy of Sciences

PhD DISSERTATION

IntelliHealth: An intelligent medical decision support system using a novel weighted multi-layer classifier ensemble framework for disease diagnosis.

EDUCATION

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| ▪ PhD Software Engineering
2011 – 2016, NUST, Pakistan | CGPA | 3.83/4.00 |
| ▪ MS Computer Software Engineering,
2007 – 2010, NUST, Pakistan | CGPA | 3.55/4.00 |
| ▪ BS. Software Engineering,
2002 – 2006, FJWU, Pakistan. | CGPA | 3.01/4.00 |

POST GRADUATE RESEARCH STUDENTS

1. **Hasham Shaukat**, Enhancing Fake News Detection with Generative Adversarial Networks: A Deep Learning Approach, FUUAST, Isb [Under Research]
2. **Adnan Bashir**, Key Player Identification in Multi-agent systems using Reinforcement Learning, FUUAST, Isb [Under Research]
3. **Gulbaz Tariq**, Smart Travel Itinerary Planner using Machine Learning Algorithms, FUUAST, Isb [Under Research]
4. **Sufyan Ashfaq**, An Efficient Approach to Heart Disease Prediction using Intelligent Data Mining Techniques, FUUAST, Isb [Graduated]
5. **Fakhar Bilal**, Churn Prediction using Data Mining Techniques, FUUAST, Isb [Graduated]
6. **Fawad Ali**, Lexicon-based Approach to Counter Online Spread of Terrorist Activities, FUUAST, Isb [Graduated]
7. **Uzair Ahmed**, Unique User Identification across Multiple Social Networks, FUUAST, Isb [Graduated]
8. **Mehpara Saghir**, Multi label Classification for Natural Language Processing, FUUAST, Isb [Graduated]
9. **Fazia Akhtar**, Energy efficient AZR-LEACH Routing Protocol, FUUAST, Isb [Graduated]

10. **Zeenat Bibi**, An Enhanced Churn Prediction Model for Telecom Industry, FUUAST, Isb [Graduated]
11. **Awais Ishtiaq**, Intelligent Heart Disease Diagnosis using Bootstrap Aggregation, FUUAST, Isb [Graduated]
12. **Tanveer Ahmed**, A Clinical Decision Support System for Multi-class classification of multiple disease diagnosis, FUUAST, Isb [Graduated]
13. **Hina Nawaz**, An Efficient Diabetes Prediction Framework using Ensemble Classifiers, FUUAST, Isb [Graduated]
14. **Irfan Ullah Khattak**, Improved disease diagnosis using enhanced feature selection, Iqra University, Isb (co-supervised) [Graduated]
15. **Shoab Nazir**, Multi-class classification for heart disease, Iqra University, Isb (co-supervised) [Graduated]

RESEARCH PUBLICATIONS (BOOKS/ BOOK CHAPTERS)

1. **Bashir, S.**, Badran, A.R. Evolving Paradigms in Active Learning: Shaping the Future of Student Engagement in Higher Education, Springer Nature (2026)
2. **Bashir, S.**, Badran, A.R. Transforming Higher Education using Artificial Intelligence: Innovations, Future Directions, and Risks, Springer Nature (2025)
3. Asad, M., Khan, Y., Qamar, U., & **Bashir, S.** (2020). Blood glucose level prediction using optimized neural network for virtual patients. In Proceedings of SAI Intelligent Systems Conference (pp. 671-683). Springer, Cham.
4. Arif, M., Qamar, U., Khan, F. H., & **Bashir, S.** (2019). A survey of customer review helpfulness prediction techniques. In Proceedings of SAI Intelligent Systems Conference (pp. 215-226). Springer, Cham.
5. Ali, F., Khan, F. H., **Bashir, S.**, & Ahmad, U. (2019). Counter terrorism on online social networks using web mining techniques. In International Conference on Intelligent Technologies and Applications (pp. 240-250). Springer, Singapore.
6. Khan, F. H., **Bashir, S.**, & Fatima, I. (2019). Detecting suspicious discussion on online forums using data mining. In International Conference on Intelligent Technologies and Applications (pp. 262-273). Springer, Singapore.
7. Bilal, S. F., **Bashir, S.**, Khan, F. H., & Rasheed, H. (2019). Malwares Detection for Android and Windows System by Using Machine Learning and Data Mining. In International Conference on Intelligent Technologies and Applications (pp. 485-495). Springer, Singapore.
8. **Bashir, S.**, Khan, F. H. Dynamic Web services Discovery: A new approach to Web Services Discovery. (Published Dec, 2011)
9. Khan, F. H. & **Bashir, S.** Dynamic Web Services Composition and Execution (Published Dec, 2011)

RESEARCH PUBLICATIONS (INTERNATIONAL JOURNALS – ISI INDEXED IMPACT FACTOR)

1. **Bashir, S.**, Maqbool, F., Khan, F. H., & Abid, A. S. (2024). Hybrid machine learning model for malware analysis in android apps. Pervasive and Mobile Computing, 97, 101859. [IF: 4.3]
2. Almazroi, A. A., Aldahhri, E. A., **Bashir, S.**, & Ashfaq, S. (2023). A Clinical Decision Support

System for Heart Disease Prediction using Deep Learning. IEEE Access. [IF: 3.4]

3. Sarfraz, M. R., Khan, M. I., Ijaz, H., & **Bashir, S.** (2022). Influence of Internet Language Hate Speech on Young Adults Mental Health and its Detection Method. *Pakistan Journal of Medical & Health Sciences*, 16(07), 315-315.
4. **Bashir, S.**, Khattak, I. U., Khan, A., Khan, F. H., Gani, A., & Shiraz, M. (2022). A Novel Feature Selection Method for Classification of Medical Data Using Filters, Wrappers, and Embedded Approaches. *Complexity*, 2022. [IF: 2.83]
5. Bilal, S. F., Almazroi, A. A., **Bashir, S.**, Khan, F. H., & Almazroi, A. A. (2022). An ensemble based approach using a combination of clustering and classification algorithms to enhance customer churn prediction in telecom industry. *PeerJ Computer Science*, 8, e854. [IF: 4.35]
6. **Bashir, S.**, Almazroi, A. A., Ashfaq, S., Almazroi, A. A., & Khan, F. H. (2021). A Knowledge-Based Clinical Decision Support System Utilizing an Intelligent Ensemble Voting Scheme for Improved Cardiovascular Disease Prediction. *IEEE Access*, 9, 130805-130822. [IF: 3.4]
7. Khan, F. H., Qamar, U., & **Bashir, S.** (2019). Enhanced Cross-Domain Sentiment Classification Utilizing a Multi-Source Transfer Learning Approach. *Soft Computing*. Springer. [IF 4.14]
8. **Bashir, S.**, Qamar, U., & Khan, F. H. (2018). WebMAC: A web based clinical expert system. *Information Systems Frontiers*, 20(5), 1135-1151. [IF: 8.85]
9. Khan, F. H., Qamar, U., & **Bashir, S.** (2017). Lexicon based Semantic Detection of Sentiments using Expected Likelihood Estimate Smoothed Odds Ratio. *Artificial Intelligence Review*, Springer, 48, no. 1, pp. 113-138. [IF: 10.7]
10. Khan, F. H., Qamar, U., & **Bashir, S.** (2017). A Semi-Supervised Approach to Sentiment Analysis using Revised Sentiment Strength based on SentiWordNet. *Knowledge and Information Systems*, 51, no. 3, pp. 851-872 [IF: 2.5]
11. **Bashir, S.**, Qamar, U., Khan, F. H., & Naseem, L. (2016). HNV: A medical decision support framework using multi-layer classifiers for disease prediction. *Journal of Computational Science*, 13, 10-25. [IF: 3.1]
12. **Bashir, S.**, Qamar, U., & Khan, F. H. (2016). IntelliHealth: A medical decision support application using a novel weighted multi-layer classifier ensemble framework. *Journal of Biomedical Informatics*, 59, 185-200. [IF: 6.32]
13. **Bashir, S.**, Qamar, U., and Khan, F. H. (2016) A Multicriteria Weighted Vote-Based Classifier Ensemble for Heart Disease Prediction. *Computational Intelligence*, Wiley, 32: 615–645. [IF: 1.8]
14. Khan, F. H., Qamar, U., & **Bashir, S.** (2016). SWIMS: Semi-supervised subjective feature weighting and intelligent model selection for sentiment analysis. *Knowledge Based Systems*, 100, 97-111. [IF: 8.04]
15. Khan, F. H., Qamar, U., & **Bashir, S.** (2016). SentiMI: Introducing point-wise mutual information with SentiWordNet to improve sentiment polarity detection. *Applied Soft Computing*, 39, 140-153. [IF: 8.263]

16. Khan, F. H., Qamar, U., & **Bashir, S.** (2016). Multi-Objective Model Selection (MOMS) based Semi-supervised Framework for Sentiment Analysis. *Cognitive Computation*, 8, no. 4, pp. 614-628. [IF: 4.89]
17. Khan, F. H., Qamar, U., & **Bashir, S.** (2016). SentiCS: Building a Lexical Resource for Sentiment Analysis using Subjective Feature Selection and Normalized Chi-Square based Feature Weight Generation. *Expert Systems*, Wiley, 33, no. 5, pp. 489-500. [IF: 4.37]
18. Khan, F. H., Qamar, U., & **Bashir, S.** (2016). eSAP: A Decision Support Framework for Enhanced Sentiment Analysis and Polarity Classification. *Information Sciences*, 367, pp. 862-873. [IF: 9.01]
19. Qamar, U., Niza, R., **Bashir, S.**, & Khan, F. H. (2016). A majority vote based classifier ensemble for web service classification. *Business & Information Systems Engineering*, 58(4), 249-259. [IF: 7.4]
20. **Bashir, S.**, Qamar, U., & Khan, F. H. (2015). Heterogeneous classifiers fusion for dynamic breast cancer diagnosis using weighted vote based ensemble. *Quality & Quantity*, 49(5), 2061-2076. [IF: 4.67]
21. **Bashir, S.**, Qamar, U., & Khan, F. H. (2015). BagMOOV: A novel ensemble for heart disease prediction bootstrap aggregation with multi-objective optimized voting. *Australasian Physical & Engineering Sciences in Medicine*, Springer, 38(2), 305-323. [IF: 1.91]
22. Khan, F. H., Qamar, U., & **Bashir, S.** (2015). Building normalized sentiMI to enhance semi-supervised sentiment analysis. *Journal of Intelligent & Fuzzy Systems*, 29, no. 5, pp. 1805-1816. [IF: 1.851]
23. **Bashir, S.**, Qamar, U., Khan, F. H., & Javed, M. Y. (2014). MV5: a clinical decision support framework for heart disease prediction using majority vote based classifier ensemble. *Arabian Journal for Science and Engineering*, Springer, 39(11), 7771-7783. [IF: 2.807]
24. Khan, F. H., **Bashir, S.**, & Qamar, U. (2014). TOM: Twitter opinion mining framework using hybrid classification scheme. *Decision Support Systems*, Elsevier, 57, 245-257. [IF: 8.69]
25. Khiyal, M. S. H., Khan, A., **Bashir, S.**, Khan, F. H., & Aman, S. (2011). Dynamic Blind Group Digital Signature Scheme in E-Banking. *International Journal of Computer and Electrical Engineering*, 3(4), 514. [IF: 1.94]
26. Khan, A., Khanam, M., **Bashir, S.**, Khiyal, M. S. H., Iqbal, A., & Khan, F. H. (2011). Entropy Based Data Hiding in Binary Document Images. *International Journal of Computer and Electrical Engineering*, 3(4), 503. [IF: 1.94]
27. Khan, A., Sadaf, J., Khiyal, M. S. H., **Bashir, S.** & Khan, F. H. (2011). Shape detection model for redrawing of basic geometric objects. *International Journal of Latest Trends in Computing*, 2(1).
28. Khayal, M. S. H., Khan, A., **Bashir, S.**, Khan, F. H., & Aslam, S. (2011). Modified new algorithm for seed filling. *Journal of Theoretical & Applied Information Technology*, 26(1).
29. **Bashir, S.**, Khan, F. H., Javed, M. Y., Khan, A., & Khayal, M. S. H., (2010). Indexer Based Dynamic Web Services Discovery. *International Journal of Computer Science and Information Security*. 7(2). [IF: 0.89]
30. Khan, F. H., **Bashir, S.**, Javed, M. Y., Khan, A., & Khayal, M. S. H., (2010). QoS Based Dynamic

RESEARCH PUBLICATIONS (IEEE INTERNATIONAL CONFERENCES)

1. Bilal, S. F., Shukat, H., **Bashir, S.**, Khan, F.H., Majid, M.D., Khan, M.A. (2025). Optimized Deep Learning Hybrid Framework for Robust Detection of Fake News on Twitter, 2nd International Conference on Emerging Technologies in Electronics, Computing and Communication 2025.
2. Faisal, M. I., **Bashir, S.**, Khan, Z. S., & Khan, F. H. (2018, December). An evaluation of machine learning classifiers and ensembles for early-stage prediction of lung cancer. *In 2018 3rd international conference on emerging trends in engineering, sciences and technology (ICEEST) (pp. 1-4). IEEE.*
3. **Bashir, S.**, Khan, Z. S., Khan, F. H., Anjum, A., & Bashir, K. (2019, January). Improving heart disease prediction using feature selection approaches. *In 2019 16th international bhurban conference on applied sciences and technology (IBCAST) (pp. 619-623). IEEE.*
4. Saghir, M., Bibi, Z., **Bashir, S.**, & Khan, F. H. (2019, January). Churn prediction using neural network based individual and ensemble models. *In 2019 16th International Bhurban Conference on Applied Sciences and Technology (IBCAST) (pp. 634-639). IEEE.*
5. Ali, F., Khan, F. H., & **Bashir, S.** (2018, November). Application development models for mobile cloud computing. *In 2018 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube) (pp. 1-6). IEEE.*
6. Khan, B. M., Mansha, A., Khan, F. H., & **Bashir, S.** (2017, December). Collaborative filtering based online recommendation systems: A survey. *In 2017 International Conference on Information and Communication Technologies (ICICT) (pp. 125-130). IEEE.*
7. Ullah, A., Qamar, U., Khan, F. H., & **Bashir, S.** (2017, October). Dimensionality reduction approaches and evolving challenges in high dimensional data. *In Proceedings of the 1st International Conference on Internet of Things and Machine Learning (pp. 1-8).*
8. **Bashir, S.**, Qamar, U., & Javed, M. Y. (2014, November). An ensemble based decision support framework for intelligent heart disease diagnosis. *In International conference on information society (i-Society 2014) (pp. 259-264). IEEE.*
9. **Bashir, S.**, Qamar, U., Khan, F. H., & Javed, M. Y. (2014, December). An efficient rule-based classification of Diabetes using ID3, C4. 5, & CART ensembles. *In 2014 12th International Conference on Frontiers of Information Technology (pp. 226-231). IEEE.*
10. Khan, S., Khan, A., Khayal, S. H., Naz, T., **Bashir, S.**, & Khan, F. H. (2010, October). Dynamic feedback based modified SNOW 2.0. *In 2010 6th International Conference on Emerging Technologies (ICET) (pp. 250-255). IEEE.*