

Dr. Asghar Ali Shah

Academics

PhD - Computer Science (PhD-CS) (AI, Machine Learning, Deep Learning) University of Management and Technology (UMT), Lahore, Pakistan	(2017 - July, 2023)
Master of Science in Information Technology (MS-IT) Institute of Management Sciences (IMSciences), Peshawar, Pakistan	(2005-2007)
Master in Information Technology (MIT) (16 Year Education) CECOSE University, Peshawar, Pakistan.	(2002-2004)
Bachelor University of Peshawar.	(2000-2001)
HSSC Peshawar Board (BISE).	(1998-1999)
SSC Peshawar Board (BISE)	(1996-1997)

Research Interest

Artificial Intelligence, Machine learning, Deep learning, Data Science, Bioinformatics, Computer Vision, Networks and information Security.

https://scholar.google.com.pk/citations?hl=en&user=EifJ2zgAAAAJ&view_op=list_works&sortby=pubdate

<https://www.linkedin.com/in/dr-asghar-ali-shah-67164670/>

Conference Papers	07	Citations	484
Journal Papers	36	h-index	12
Total	41	i10-index	16

Reviewer of Journals

Journal Name	Role	Impact Factor and category
Scientific Reports	Reviewer	IF: 4.6, Q2, Category "W"
Connection Science	Reviewer	IF: 5.3, Q1, Category "W"
BMC Chemistry	Reviewer	IF: 4.1, Q2, Category "W"
International Journal of Data Science and Analytics	Reviewer	IF: 2.4, Category "X"
Technology and Health Care	Reviewer	Category "Y"
Cureus Journal of Computer Science	Associate Editor	

Research work

- [1] S. Kanwal, S. Inam, **A. A. Shah**, et al., "A robust approach to satellite image encryption using chaotic map and circulant matrices," *Engineering Reports*, vol. 2024, no. e13010, 2024, doi: 10.1002/eng2.13010. **(Impact factor. 1.8, Q3, Category X in HJRS)**
- [2] **Shah, A.A.**, Daud, A., Bukhari, A. *et al.* DEL-Thyroid: deep ensemble learning framework for detection of thyroid cancer progression through genomic mutation. *BMC Med Inform Decis Mak* **24**, 198 (2024). <https://doi.org/10.1186/s12911-024-02604-1>. **(Impact factor. 3.3, Q2, Category W in HJRS)**.
- [3] M. U. Hashmi, M. Hussain, **A. A. Shah**, M. Babar, and B. Qureshi, "Synchronizing smart city nodes using Skew Integrated Timestamp (SIT)," *PeerJ Computer Science*, vol. 10, p. e2049, 2024. doi: 10.7717/peerj-cs.2049. **(Impact factor. 2.4, Q2, Category W in HJRS)**

- [4] Ali Sohail, **Asghar Ali Shah**, Sheeba Ilyas and Nizal Alshammry, "A CNN-based Deep Learning Framework for Driver's Drowsiness Detection" International Journal of Advanced Computer Science and Applications(IJACSA), 15(3), 2024. <http://dx.doi.org/10.14569/IJACSA.2024.0150317> (**Impact factor. 0.7, Q3**)
- [5] M. Asfand-e-yar, Q. Hashir, **A. A. Shah**, H. A. Malik, A. Alourani, and W. Khalil, "Multimodal CNN-DDI: Using Multimodal CNN for Drug to Drug Interaction Associated Events," *Scientific Reports*, vol. 14, no. 1, pp. 1-10, 2024. (**Impact factor. 4.6, Q2, Category W in HJRS**)
- [6] A. Khan, **A. A. Shah**, L. Khan, M. R. Faheem, M. Naeem and H. -T. Chang, "Using VizDoom Research Platform Scenarios for Benchmarking Reinforcement Learning Algorithms in First-Person Shooter Games," in *IEEE Access*, vol. 12, pp. 15105-15132, 2024, doi: 10.1109/ACCESS.2024.3358203. (**Impact factor. 3.467, Q2, Category W in HJRS**).
- [7] **A. A. Shah**, A. S. A. Shaker, S. Jabbar, Q. Abbas, T. S. Al-Balawi, M E. Celebi, "An Ensemble-based Deep Learning Model for Detection of Mutation Causing Cutaneous Melanoma", *Scientific Reports*, 2023. (**Impact factor. 4.6, Q2, Category W in HJRS**)
- [8] **A. A. Shah**, F. Alturise, T. Alkhalifah, A. Faisal, and Y. D. Khan, "EDLM: Ensemble deep learning model to detect mutation for the early detection of Cholangiocarcinoma," *Genes*, vol. 14, no. 5, p. 1104, 2023. doi:10.3390/genes14051104. (**Impact factor. 4.141, Q2, Category W in HJRS**).
- [9] **Shah, A. A.**, Malik, H.A.M., Muhammad, A. *et al.* Deep learning ensemble 2D CNN approach towards the detection of lung cancer. *Sci Rep* 13, 2987 (2023). <https://doi.org/10.1038/s41598-023-29656-z>. (**Impact factor. 4.996, Q2, Category W in HJRS**)
- [10] **A. A. Shah** and Y. D. Khan, "SulfoTyr-PseAAC: A Machine Learning Framework to Identify Sulfotyrosine Sites," 2022 International Conference on Information Science and Communications Technologies (ICISCT), Tashkent, Uzbekistan, 2022, pp. 1-5, doi: 10.1109/ICISCT55600.2022.10146792. (**International Conference IEEE**)
- [11] A. Sohail, N. A. Nawaz, **A. A. Shah**, S. Rasheed, S. Ilyas and M. K. Ehsan, "A Systematic Literature Review on Machine Learning and Deep Learning Methods for Semantic Segmentation," in *IEEE Access*, doi: 10.1109/ACCESS.2022.3230983. (**Impact factor. 3.467, Q2, Category W in HJRS**)
- [12] Malik, H.A.M.; **Shah, A.A.**; Muhammad, A.; Kananah, A.; Aslam, A. Resolving Security Issues in the IoT Using Blockchain. *Electronics* 2022, 11, 3950. <https://doi.org/10.3390/electronics11233950>. (**Impact factor. 2.69, Q3, Category W in HJRS**)
- [13] Iqbal, T., Bilal, M., Farooq, A., Sarwar, N., **Shah, A.A.**, Chughtai, T.A. (2022). A Survey on Measurement Based Shadow Fading Model for Vehicular Communications. In: Jawawi, D.N.A., Bajwa, I.S., Kazmi, R. (eds) Engineering Software for Modern Challenges. ESMoC 2021. Communications in Computer and Information Science, vol 1615. Springer, Cham. https://doi.org/10.1007/978-3-031-19968-4_17 (**International Conference**).
- [14] **Shah AA**, Alturise F, Alkhalifah T, Khan YD. Evaluation of deep learning techniques for identification of sarcoma-causing carcinogenic mutations. *DIGITAL HEALTH*. 2022;8. doi:10.1177/20552076221133703. (**Impact factor. 4.687, Q1, Category W in HJRS**)
- [15] **Shah, Asghar Ali**, Fahad Alturise, Tamim Alkhalifah, and Yaser Daanial Khan. 2022. "Deep Learning Approaches for Detection of Breast Adenocarcinoma Causing Carcinogenic Mutations" *International Journal of Molecular Sciences* 23, no. 19: 11539. <https://doi.org/10.3390/ijms231911539>. (**Impact factor. 6.208, Q1, Category W in HJRS**)
- [16] **A. A. Shah**, H. Malik, A. Mohammad, Y. Khan and A. Alourani, "Machine learning techniques for identification of carcinogenic mutations, which cause breast adenocarcinoma", *Scientific Reports*, vol. 12, no. 1, 2022. Available: 10.1038/s41598-022-15533-8. (**Impact factor. 4.996, Q2, Category W in HJRS**)
- [17] H. Shafique, **A. A. Shah**, M. A. Qureshi, M. K. Ehsan, M. R. Amirzada, "Machine Learning Empowered Efficient Intrusion Detection Framework," *VFAST Transactions on Software Engineering*, vol. 10, no. 2, pp. 27-35, 2022. (**HEC Recognized Journal Category Y in HJRS**)
- [18] S. Chaudhry, A. Muhammad, **A. A. Shah**, and F. Batool, "Human-Computer User Interface Design for Semiliterate and Illiterate Users", *Lahore Garrison University Research Journal of Computer Science and Information Technology*, vol. 5, no. 4, pp. 62-77, 2021. Available: 10.54692/Agurjcsit.2021.0504254. (**HEC Recognized Journal Category Y in HJRS**)
- [19] S. Saeed, **A. A. Shah**, M. Ehsan, M. Amirzada, A. Mahmood and T. Mezgebo, "Automated Facial Expression Recognition Framework Using Deep Learning", *Journal of Healthcare Engineering*, vol. 2022, pp. 1-11, 2022. Available: 10.1155/2022/5707930 [Accessed 24 June 2022]. (**Impact factor. 2.682, Q2, Category W in HJRS**)
- [20] H. Shamim and **A. A. Shah**, "Automated Vulnerability detection for software using NLP techniques", *jictra*, pp. 48-57, Dec. 2021. (**HEC Recognized Journal Category Y in HJRS**)
- [21] N. Az, M. K. Ehsan, M. A. Qureshi, A. Ali, M. R. Amirzada, and **A. A. Shah**, "Prediction of COVID-19 daily infected cases (worldwide & United States) using regression models and neural network," **VFAST Trans. Softw. Eng.**, vol. 9, no. 4, pp. 36-43, 2021, doi: 10.21015/vtse.v9i4.846. (**HEC Recognized Journal Category Y in HJRS**)

- [22] H. Shamim and **A. A. Shah**, "Detecting social bots activity in Twitter using deep learning approach", *jictra*, pp. 36-46, Jun. 2021. **(HEC Recognized Journal Category Y in HJRS)**
- [23] S. Ud Din, M. A. F. Shah, and **A. A. Shah**, "Analysis of Machine Learning Techniques for Detection of Tumor Suppressor Genes for Early Detection of Cancer: A Systematic Literature Review," 2021 International Conference on Innovative Computing (ICIC), 2021, pp. 1-10, doi: 10.1109/ICIC53490.2021.9691506. **(IEEE International Conference)**
- [24] M. A. F. Shah, S. Ud Din and **A. A. Shah**, "Analysis of Machine Learning Techniques for Detection Framework for DNA Repair Genes to help Diagnose Cancer: A Systematic Literature Review," 2021 International Conference on Innovative Computing (ICIC), 2021, pp. 1-10, doi: 10.1109/ICIC53490.2021.9692921. **(IEEE International Conference)**
- [25] S. M. Shehryar, M. A. Shahid and **A. A. Shah**, "Mutation Detection in Genes Sequence Using Machine Learning," 2021 International Conference on Innovative Computing (ICIC), 2021, pp. 1-7, doi: 10.1109/ICIC53490.2021.9693088. **(IEEE International Conference)**
- [26] **A. A. Shah**, M. K. Ehsan, A. Sohail and S. Ilyas, "Analysis of Machine Learning techniques for identification of post translation modification in protein sequencing: A Review," 2021 International Conference on Innovative Computing (ICIC), 2021, pp. 1-6, doi: 10.1109/ICIC53490.2021.9693020. **(IEEE International Conference)**
- [27] M. Qadir, I. Noreen, and **A. A. Shah**, "Bi-LSTM Deep Learning Approach for Employee Churn Prediction", *jictra*, Jun. 2021. **(HEC Recognized Journal Category Y in HJRS)**
- [28] M. Elhoseny, K. Haseeb, **A. A. Shah**, I. Ahmad, Z. Jan, and M. I. Alghamdi, "IoT Solution for AI-Enabled PRIVACY-PREServing with Big Data Transferring: An Application for Healthcare Using Blockchain," *Energies*, vol. 14, no. 17, p. 5364, 2021. **(Impact factor. 3.004, Q3, Category W in HJRS)**
- [29] S. Ilyas, **A. A. Shah** and A. Sohail, "Order Management System for Time and Quantity Saving of Recipes Ingredients Using GPS Tracking Systems," in *IEEE Access*, vol. 9, pp. 100490-100497, 2021, doi: 10.1109/ACCESS.2021.3090808. **(Impact factor. 3.367, Q1, Category W in HJRS)**
- [30] T. Saba, K. Haseeb, **A. A. Shah**, A. Rehman, U. Tariq, and Z. Mehmood, "A Machine-Learning-Based Approach for Autonomous IoT Security," in *IT Professional*, vol. 23, no. 3, pp. 69-75, 1 May-June 2021, doi: 10.1109/MITP.2020.3031358. **(Impact factor. 2.626, Q2, Category W in HJRS)**
- [31] **A. A. Shah** and Y. D. Khan, "Identification of 4-carboxyglutamate residue sites based on position based statistical feature and multiple classification," *Scientific Reports*, vol. 10, no. 1, 2020. **(Impact factor. 3.998, Q1, Category W in HJRS)**
- [32] M. K. Ehsan, **A. A. Shah**, M. R. Amirzada, N. Naz, K. Konstantin, M. Sajid, and A. R. Gardezi, "Characterization of sparse WLAN data traffic in opportunistic indoor environments as a prior for coexistence scenarios of modern wireless technologies," *Alexandria Engineering Journal*, 2020. **(Impact factor. 2.46, Q2, Category W in HJRS)**
- [33] **A. A. Shah**, N. Usman, J. Waqar and H. Saeed, "An Efficient Machine Learning Prediction based Model for Intrusion Detection," 2019 International Conference on Innovative Computing (ICIC), Lahore, Pakistan, 2019, pp. 1-6. **(IEEE International Conference)**
- [34] **A. A. Shah**, G. Mustafa, Z. Ali, and T. Anees, "Video Stitching with Localized 360o Model for Intelligent Car Parking Monitoring and Assistance System," *IJCSNS International Journal of Computer Science and Network Security*, vol. 19, no. 5, pp. 43-47, May. 2019. **(HEC Recognized Journal Category Y in HJRS)**
- [35] A. Ali, **A. A. Shah**, K. Aftab, M. Usman, "Multicamera video stitching surveillance system," *VAWKUM Transactions on Computer Sciences*, vol. 16, no. 1, pp. 09-18, Jan. 2019.
- [36] M. H. Aziz, **A. A. Shah**, "Anomaly based intrusion detection system which analyze the dataset and detect intrusion," *VAWKUM Transactions on Computer Sciences*, vol. 16, no. 1, pp. 09-18, Jan. 2019. **(HEC Recognized Journal Category Y in HJRS)**
- [37] **A. A. Shah**, M. K. Ehsan, K. Ishaq, Z. Ali, "An efficient hybrid classifier model for anomaly intrusion detection system," *IJCSNS International Journal of Computer Science and Network Security*, vol. 18, no. 11, pp. 127-136, Nov. 2018. **(HEC Recognized Journal Category Y in HJRS)**
- [38] **A. A. Shah**, Y. D. Khan, M. A. Ashraf, "Attacks analysis of TCP and UDP of UNSW-NB15 dataset," *VAWKUM Transactions on Computer Sciences*, vol. 15, no. 3, pp. 147-149, Sept. 2018. **(HEC Recognized Journal Category Y in HJRS)**
- [39] Z. U. Rehman, H. Fayyaz, **A. A. Shah**, N. Aslam, M. Hanif, S. Abbas, "Performance evaluation of MLPNN and NB: comparative study on car evaluation dataset," *IJCSNS International Journal of Computer Science and Network Security*, vol. 18, no. 9, pp. 144-147, Sept. 2018. **(HEC Recognized Journal Category Y in HJRS)**
- [40] **A. A. Shah**, M. S. H. Khiyal, M. D. Awan, "Analysis of Machine Learning Techniques for Intrusion Detection System: A Review," *International Journal of Computer Applications*, vol. 119, no. 3, pp. 19-29, June 2015.
- [41] G. A. Shah, A. Khan, **A. A. Shah**, M. Raza, "A review on image contrast enhancement techniques using histogram equalization," *Science International*, vol. 27, no. 2, pp. 1297-1302, March 2015. **(HEC Recognized Journal Category Y)**

Job Experience

Associate Professor:

Associate Professor at Department of Computer science, Beaconhouse International College, H-11 Islamabad, Since 09/09/2024. (asghar.ali@bic.edu.pk)

Teaching one course to the students enrolled in **Liverpool John Moores University (LJMU)**. Using **Canvas** Learning Management System (LMS). (BHCSALAM@ljmu.ac.uk)

Teaching Three courses to the students enrolled in **University of London (UoL)**. Using **Moodle** Learning Management System (LMS). All the courses of UoL is also available on course era for both students and faculty. (asghar.shah@london.ac.uk)

Teaching one course to the students enrolled in **University Essex**. Using **Moodle** Learning Management System (LMS). (as24325@essex.ac.uk)

Assistant Professor:

Assistant Professor at Department of Computer science, Bahria University E-8 Islamabad, From 02/03/2017 to 05/09/2024.

Member of Research Lab Center of excellence in Artificial Intelligence (CoE-AI), Bahria University.

Courses taught in Undergraduate Programs:

Computer Programming, Object Oriented Programming, Data Structure and Algorithm, Operating System, Data Encryption and Security, Information Security, Internet Architecture and Protocols, Data Communication and Networks, Artificial Intelligent (Python), Data Mining (Python), Machine Learning (Python), Computer vision, Digital Media analytics (Python, Orange Data Mining Tool).

Courses taught in Post Graduate Programs:

Data Visualization, Adv. Data Visualization, Adv. Information Security, Adv. Network Security, Network Protocols and Standards, Network Management and Administration.

MS Thesis Supervised:

1. **Abrar Saeed** 03-243162-015 (2019): Moving object detection and tracking in multiple cameras.
2. **Hassan Shaifique** 03-243162-003 (2019): Anomaly in intrusion detection system using machine learning.
3. **Saad-ur-Rahim** 03-243162-011 (2019): 3D Object Construction from 2D images.
4. **Muhammad Imran Afzal** 03 243172 028 (2029): Prediction of ADP Ribosylation factor like protein using PSEACC and statistical moments.
5. **Hafiza Sana Shamim** 03-243202-002 (2022): Detecting social bots' activity on twitter using a deep learning approach.
6. **Ayesha Aslam** 03-243171-001 (2019): Resolving security issues in iot using block chain.
7. **Hafsa Naveed** 03-2413181-22 (2020); Quora questions classification detect toxic content to improve online conversation.
8. **Madiha Qadir** 54601 (2029): Deep learning approach for efficient prediction of churn employee.
9. **Zunaira Riaz** 03-243181-026 (2020): Customer churn prediction in telecommunication industry.
10. **Muhammad Adeel Izhar** 03-243192-007 (2022): Machine learning framework for identification of mutation in gene sequences to detect cancer progress.
11. **Bibi Amna** 01-249222-004 (2024): SynerDL: Advancing Drug Combination Synergy Prediction with Deep Learning
12. **Iffa Shah** 01-249222-009 (2024): Climate-Resilient Farming: A Predictive Modeling Approach for Short-Term Evapotranspiration for Sustainable Agriculture in Pakistan

Additional Responsibilities:

Library Coordinator:

Coordinating with faculty to increase the library resources.

Contributed proactively during 1st and 2nd NCEAC accreditation tasks related to Library upgradation as per NCEAC requirements.

DBOS Coordinator:

Organizing Departmental Board of studies meetings, writing meeting minutes and presenting it to Faculty board of studies.

Member of Faculty selection committee:

Member of Departmental Research Committee (DRC)

Lecturer:

- Lecturer in Department of Computer Science at Kateb University from 10/11/2007 to 25/01/2017
- Lecturer at **Northern University** from October 2004 to August 2007

International Certifications

CCNA (Cisco Certified Network Associate)
Cisco ID: CSC011278662



International Certification courses covered:

- CCNP (Cisco Certified Network Professional)
- MCITP (Microsoft Certified Information Technology Professional).
- JCP (Java Certified Programmer).

Professional training and workshops

Certification	Year	Field of Study	Institution	Duration
Artificial Intelligence	2024	AI	HUAWEI	03 Months
AI InnoFest – 2024	2024	AI	Bahria University	02 days
02-Days Data Science national Workshop using Python (Hands On)	2020	Data Science	UMT	02 days
QA Meetup 19	2019	Software Engineering	FAST	01 Day
Practical Implementation of research software	2019	Research in AI	UMT Lahore	02 Days
Outcome Based Education	2019	Acedemic	Bahria Univeristy	02 Days
Data Science Workshop	2018	Data Science	Sponsored by HEC & COMSATS	05 Days
Master Training of Trainers	2011	Teaching	USAID	05 Days
CDMA2000 1X RC1 & RC2	2007	Computer Networks	Sponsored by HEC & Pakistan CDMA forum	03 Days
Project Management	2006	Project Management	IMSciences	03 Days
B. ED	2013	Education	Allama Iqbal Open University	02 Years

Complete BS - Computer Science Curriculum Development.

ATVI (Afghanistan Technical Vocational Institute) at Kabul Afghanistan.
Bakhtar University at Kabul Afghanistan.
Kateb University at Kabul Afghanistan.

Extracurricular activities

- ❖ Tow day's workshop on **Drug Prevention Among Youth** on 16th & 17th November 2000.
- ❖ **Achievement certificate** of Welfare Society.
- ❖ **Certificate of Honor** from **Madadgar Blood Donor** in Government Collage Peshawar.
- ❖ **Certificate of Blood donation** from **Madadgar Blood Donor**.
- ❖ Certificate of Clean **Up the World 2002** from United Nations Environment Program.
- ❖ **The Bronze Standard** of the **National Award for Young People 2003**.
- ❖ **The Gold Standard** of the **Duke of Edinburgh's Award**.

Communication Skills

English, Urdu, Pashto and Persian (Dari).

Personal Information

Father's Name: Sadiq Shah
Date of birth: 25th October 1981
E-Mail: alishahsadiq@gmail.com, asghar.ali@bic.edu.pk, as24325@essex.ac.uk
Contact No: 00923339246924 NIC#: 17301-1253262-1
Postal Address: Flat no 2, Adnan Plaza near babri masjid, G-10 Markaz, Islamabad, Pakistan.

References

Dr. M. Khurram Ehsan: Associate Professor at Bahria University (mkehsan.buic@bahria.edu.pk)
Dr. M Usman Hashmi: Senior Assistant Professor at Bahria University (muhashmi.buic@bahria.edu.pk)
Dr. Yaser Daniaal Khan: Professor at University Management and Technology (yaser.khan@umt.edu.pk)
Dr. M Daud Awan: Vice Chancellor at Preston University (drdaudawan@hotmail.com)