Dr. Aga Basit Iqbal

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Employment History

07/04/2026 – present	**Assistant Professor,** Department of Computer Science and Engineering, Islamic University of Science and Technology, Kashmir, J&K, India.
01/04/2019 – 31/08/2019	**Lecturer,** Computer Training, Guru Nanak College of Education and Training, Awantipora, Kashmir, India.
10/03/2022 – 21/07/2022	**Research Assistant,** Department of CSE, Islamic University of Science and Technology Awantipora, Kashmir, J&K, India.
11/10/2024– 06-04-2026	**Research Assistant,** Department of CSE, Islamic University of Science and Technology Awantipora, Kashmir, J&K, India.

Education

20/07/2022 – 11/12/2025	**Ph.D.** Department of Computer Science and Engineering, Islamic University of Science and Technology Awantipora, Kashmir, India. PhD Topic: *Identification of Novel Inhibitors for Therapeutic Targets in Cancers Using Graph Neural Networks.*
2019 – 2021	**M.Tech. Computer Science**, University of Jammu, Jammu,J&K, India.
2014 – 2018	**B.E. Computer Engineering,** University of Kashmir, Kashmir, J&K, India.

Research Publications

Journal Articles

1. **Iqbal, Aga Basit**, A. Assad, B. Bhat, M. A. Macha, and S. Z. A. Shah, "Mpnn-cwexplainer: An enhanced deep learning framework for hiv drug bioactivity prediction with class-weighted loss and explainability," *Life Sciences*, p. 123 835, 2025, **SCIE, I.F = 5.1**.
2. **Iqbal, Aga Basit**, T. A. Masoodi, A. A. Bhat, M. A. Macha, A. Assad, and S. Z. A. Shah, "Explainable ai-driven prediction of ape1 inhibitors: Enhancing cancer therapy with machine learning models and feature importance analysis," *Molecular Diversity*, pp. 1–20, 2025, **SCIE, I.F = 3.9**.
3. **Iqbal, Aga Basit**, I. A. Shah, Injila, A. Assad, M. Ahmed, and S. Z. Shah, "A review of deep learning algorithms for modeling drug interactions," *Multimedia Systems*, vol. 30, no. 3, p. 124, 2024. **SCIE, I.F = 3.9**.
4. M. A. Kumar and **Basit Aga, et al**, "Nuclear receptor subfamily 4a2: Novel role and a potential therapeutic lead in cancers," *Journal of Clinical Oncology*, vol. 42, no. 16_suppl, p. 18 017, 2024, **SCIE, I.F = 45.3**.

Journal Articles (Communicated)

1. I. Gull and **Iqbal, Aga Basit**, "Human action detection for video surveillance via data driven approaches: A survey and future directions," *Image Signal and Video Processing*, Online ISSN:1863–1711, **SCIE, IF : 2.1**,

2. **Iqbal, Aga Basit**, I. Gull, S. Z. A. Shah, A. Assad, and M. A. Macha, "Cf-gsl: Counterfactual-augmented graph structure learning for interpretable prediction and validation of app inhibitors in alzheimer's disease," *Health Information Science and Systems*, Online ISSN:2047–2501, **SCIE, I.F = 3.4**,

3. **Iqbal, Aga Basit** et al., "Predictive modeling of mental health risks in the kashmir region: A machine learning-based study on depression and anxiety disorders," *Machine Learning*, Online ISSN:0885–6125, **SCIE, I.F = 2.9**,

4. M. A. Kumar, **Iqbal, Aga Basit**, and et al, "Artificial intelligence-driven drug repurposing: A new era in cancer drug discovery," *British Journal of Pharmacology*, Online ISSN:1476–5381, **SCIE, I.F = 7.7**,

Conference Proceedings/ Presented

1. **Aga Basit Iqbal**, S. Z. A. Shah, A. Assad, and M. A. Macha, "Predicting egfr inhibitor bioactivity using machine learning: An integrated approach with feature importance and explainable ai techniques," in *Proceedings of the 1st J&K International Conference on Breast Cancer*, Presented paper, Department of Bioresources, University of Kashmir, Srinagar, Jammu and Kashmir, India, Oct. 22–24, 2024.

2. **Aga Basit Iqbal**, S. Z. A. Shah, A. Assad, and M. A. Macha, "Modeling drug-target and drug-drug interactions using deep learning algorithms: A review," in *Proceedings of the International Conference on Artificial Intelligence, Machine Learning, and Intelligent Systems (ICAIMLIS)*, Presented paper, Islamic University of Science and Technology (IUST), Awantipora, Jammu and Kashmir, India, Aug. 31, 2023.

Book Chapter

1. **Iqbal, Aga Basit**, I. Gull, S. Z. A. Shah, A. Assad, and M. A. Macha, "Artificial intelligence in drug discovery and drug target interactions," in *Artificial Intelligence in Human Health and Diseases*, Springer, 2025, pp. 301–321.

Skills

Subjects	Data Structure, Python, Matlab, Scilab, Artificial Intelligence, Opertaing Systems, Machine Learning.
Languages	Strong reading, writing and speaking competencies for English, Urdu and Kashmiri.
Coding	Python(Numpy, Pandas, Matplotlib), Scilab, Matlab.
Misc.	Academic research, teaching, training, LaTeX typesetting and publishing.

Miscellaneous Experience

Projects Guided

2022 **Snowfall Prediction using Long Short Term Memory Model**, Implemented an LSTM-based deep learning model for time-series forecasting to predict snowfall patterns using Kashmir meteorological data.

2023 **Landslide Detection using Wireless Sensor Network and IoT**, Designed an IoT-based landslide monitoring system integrating multiple sensors for real-time environmental hazard detection.

2024 **Drug Inhibition Prediction on Alzheimer's Disease using Machine Learning**, Guided a research project employing ML algorithms for predicting inhibitory compounds targeting Alzheimer's-related proteins.

2020 **Step-by-Step Explainability: Embedding XAI Throughout the ML Workflow**, Embedding explainability at every stage of the machine-learning pipeline to produce transparent, trustworthy models and actionable insights for model design, validation, and deployment. .

Miscellaneous Experience (continued)

Certifications

2016 **Industrial Training in CCNA**. Awarded by IITS Jammu.

2017 **Industrial Training in PHP**. Awarded by IITS Jammu.

Workshops / FDPs Attended

2022 **Latest Trends and Challenges in Cybersecurity,** Department of CS&IT, University of Jammu. *Duration:* Two days

11–12 May 2022 **Digital Marketing Workshop,** Department of CSE, Islamic University of Science and Technology (IUST), Kashmir. *Duration:* Two days

02–03 Nov 2022 **Data Analysis and Cloud-Based IoT Workshop,** SSM College of Engineering and Technology, Parihaspora Pattan . *Duration:* Two days

1st- 5th july 2024 **Short Course on Research Applications of Deep Learning,**NIT Hamirpur. *Duration:* Five days

2024 **Bio-medical Research in Drug Discovery (Bio-medical assay: Cell based and mice experiments),** IIIM Srinagar. *Duration:* Three days

References

Dr. Syed Zubair Ahmad Shah
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Islamic University of Science and Technology (IUST), Awantipora Jammu and Kashmir, India, 192123
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Dr. Muzafar A. Macha
Assistant Professor and I/C Head, Watson-Crick Centre for Molecular Medicine
Islamic University of Science and Technology (IUST), Awantipora Jammu and Kashmir, India, 192123
Education: Ph.D. in Biochemistry,AIIMS, New Delhi, India (Geeta Mittal Awardee/Gold Medalist)
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Dr. Assif Assad
Assistant Professor, Coordinator Center for AI
Islamic University of Science and Technology (IUST),Awantipora J&k, India, 192123
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