Azal Ahmad Khan

Education University of Minnesota, Twin-Cities 09/2024 - Present Ph.D., Computer Science and Engineering (GPA: 3.95/4.0) > Advisor: Ali Anwar > Amazon ML Systems Fellow (2025) & GAGE Fellow (2024)

Indian Institute of Technology (IIT), Guwahati B.Tech., Chemical Science and Technology

11/2020 - 05/2024

Research Experience

NEC Laboratories America, San Jose, CA 05/2025 - 08/2025Research Intern with Vijay Kumar, Manmohan Chandrakar University of Minnesota, Twin-Cities, MN 09/2024 - 12/2024Graduate Assistant with Ali Anwar University of Minnesota. 01/2022 - 05/2024Research Intern with Ali Anwar University of New South Wales. 01/2022 - 12/2023

Awards & Grants

2025 Amazon Machine Learning System Fellowship. University of Minnesota GAGE Fellowship. 2024 Travel Grant, Google Research Week. 2024 2024 Highly Commended (Top 10%), Global Undergraduate Research Award 2024.

Publications & Pre-prints

Research Intern with Rohitash Chandra

* Equal Contribution

EMNLP '25 Accelerating LLM Reasoning via Early Rejection with Partial Reward Modeling Seyyed Saeid Cheshmi*, Azal Ahmad Khan*, Xinran Wang, Zirui Liu, Ali Anwar. In Proceedings of Findings of EMNLP 2025.

arXiv Sem-DPO: Mitigating Semantic Inconsistency in Preference Optimization for Prompt **Engineering**

Anas Mohamed*, Azal Ahmad Khan*, Xinran Wang, Ahmad Faraz Khan, Shuwen Ge, Saman Bahzad Khan, Ayaan Ahmad, Ali Anwar.

IROS '25 Safety Aware Task Planning via Large Language Models in Robotics

Azal Ahmad Khan*, Michael Andrev*, Muhammad Ali Murtaza, Sergio Aguilera, Rui Zhang, Jie Ding, Seth Hutchinson, Ali Anwar.

In the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2025.

Under Beyond Expectations: Quantile-Guided Alignment for Risk-Calibrated Language Review **Models**

> Xinran Wang, Jin Du, Azal Ahmad Khan, Qi Le, Enmao Diao, Jiawei Zhou, Jie Ding, Ali Anwar.

Under Review at NeurIPS 2025.

arXiv LADs: Leveraging LLMs for AI-Driven DevOps

Ahmad Faraz Khan*, **Azal Ahmad Khan***, Anas Mohamed, Haider Ali, Suchithra Moolinti, Sabaat Haroon, Usman Tahir, Mattia Fazzini, Ali R. Butt, Ali Anwar. *Pre-print*.

IPDPS '25 IP-FL: Incentivized and Personalized Federated Learning

Ahmad Faraz Khan, Xinran Wang, Qi Le, Zain ul Abdeen, **Azal Ahmad Khan**, Haider Ali, Ming Jin, Jie Ding, Ali Butt, Ali Anwar.

In Proceedings of the 39th IEEE International Parallel & Distributed Processing Symposium.

EuroSys '24 FLOAT: Federated Learning Optimizations with Automated Tuning
Ahmad Faraz Khan, Azal Ahmad Khan, Ahmed M Abdelmoniem, Samuel Fountain, Ali
Butt, Ali Anwar.

In Proceedings of the Nineteenth European Conference on Computer Systems. Acceptance Rate: 16%

- BigData '24 Personalized Federated Learning Techniques: Empirical Analysis
 Azal Ahmad Khan, Ahmad Faraz Khan, Haider Ali, Ali Anwar.
 In IEEE International Conference on Big Data 2024 (Short Paper).
- BigData '24 Mitigating Sycophancy in Large Language Models via Direct Preference Optimization Azal Ahmad Khan, Sayan Alam, Xinran Wang, Ahmad Faraz Khan, Debanga Raj Neog, and Ali Anwar.

In IEEE International Conference on Big Data 2024 (Short Paper).

Elsevier A review of ensemble learning and data augmentation models for class imbalanced problems: combination, implementation and evaluation

Azal Ahmad Khan, Omkar Chaudhari, Rohitash Chandra.

Expert Systems with Applications, Volume 244, 122778.

MDPI A Quantum-Inspired Predator-Prey Algorithm for Real-Parameter Optimization Azal Ahmad Khan, Salman Hussain, Rohitash Chandra.

Algorithms 2024, 17(1), 33.

Technical Skills

Programming Python, C/C++ Web Technologies FastAPI LLM Libraries and Frameworks LangChain, Ollama, OpenAI, AutoGen, Hugging Face, Agno ML Tools Pandas, Numpy, Scipy, Matplotlib, Scikit-learn, Tensorflow, Pytorch, OpenCV Miscellaneous Git, GitHub, SQL, LATEX