

Azam Ikram

COMPUTER SCIENCE · RESEARCH SCIENTIST

West Lafayette, IN, USA

+1 (765)-407-6222 | mikram@purdue.edu | azamikram.github.io | azamikram | azam-ikram

Education

Purdue University

West Lafayette, IN

PHD, COMPUTER ENGINEERING

2021 - Present

- Advisor: Prof. Saurabh Bagchi
- Thesis: Optimizing Cloud Applications through Causal Inference and Machine Learning

Lahore University of Management Sciences

Lahore, Pakistan

MASTER OF SCIENCE, COMPUTER SCIENCE

2018 - 2020

- Graduated with **3.73 CGPA and Dean's Honors Roll**.
- Relevant Courses: Advanced Algorithms, Applied Probability, Big Data Analytics, Distributed Systems, Internet of Things, Network Security and Topics in Internet Research.

Publications

1. **Azam Ikram**, Kenneth Lee, Shubham Agarwal, Shiv Saini, Saurabh Bagchi, Murat Kocaoglu
Root Cause Analysis of Failure with Observational Causal Discovery
Under Review
2. **Azam Ikram**, Ashraf Mahgoub, Sameh Elnikety, Saurabh Bagchi
AQUILA: Workload-aware Scheduling of Serverless DAGs
Under Review
3. **Azam Ikram**, Sarthak Chakraborty, Subrata Mitra, Shiv Saini, Saurabh Bagchi, Murat Kocaoglu
Root Cause Analysis of Failures in Microservices through Causal Discovery
NeurIPS 2022 (CORE RANK: A*), NY, USA. (ACCEPT. RATE=25.6%)
4. Mukhtiar Ahmad, Usman Jafri, **Azam Ikram**, Wasiq Ahmad, Syed Ali Nawazish, Zartash Uzmi, Zafar Ayyub Qazi
A Low Latency and Consistent Cellular Control Plane
ACM SIGCOMM 2020 (CORE RANK: A*), NY, USA. (ACCEPT. RATE=22%)

Experience

Dependable Computing Systems Laboratory — Purdue University

West Lafayette, IN

RESEARCH ASSISTANT

Sep 2021 - Present

- Broadly, my research areas include large-scale distributed systems, cloud computing, computer networks, and applied machine learning in systems.
- Researching scalable **LLM inference** through a dynamic scheduling system for efficient large-scale deployment.
- Another project aims to **reduce cost (\$) and latency** of the serverless DAGs by allocating functions with heterogeneous sizes.

Microsoft Research

Redmond, WA

RESEARCH INTERN

Jun 2022 - Aug 2022

- Worked with the Serverless Group to optimize the workflow of serverless application for both the user and the cloud provider.
- Built a scheduler for serverless DAGs that **reduces the cost (\$)** of running an application **by 46%** under strict SLO.

Educative, Inc.

Lahore, Pakistan

SOFTWARE ENGINEER

Aug 2020 - Sep 2021

- Part of the team to maintain a learning platform used by around **500k developers** using Javascript, Python and GCP.
- Built an independent microservice to provide the feature of workspaces using **virtual file system**.
- Worked on optimizing the **microservice-based workflow** and providing better resource management.

Distributed Computing Lab — Lahore University of Management Sciences

Lahore, Pakistan

RESEARCH ASSISTANT

Feb 2019 - Aug 2020

- Worked with Dr. Zafar Ayyub Qazi and Dr. Zartash Afzal Uzmi on improving latencies for next-generation cellular networks.
- Designed and implemented Traffic Generator for **fast packet processing at 10Gbps** through bypassing the kernel via **DPDK**.
- Designed and implemented an in-memory store to save and replay the control messages of 4G/LTE in the case of failures.
- **Improved latency** of control plane messages of 4G/LTE **by up to 5.6x**.

Honors and Awards

- Dean's Honor List, LUMS 2020
- 1st position in CS department Final Year Project competition, COMSATS University, Lahore Campus 2016