

Abdullah Bin Faisal

✉: abdullah@cs.tufts.edu 🏠: <https://www.eecs.tufts.edu/~abdullah>

SUMMARY

I am actively seeking research opportunities with groups working on large-scale AI systems. Recently, I have been exploring improving access to AI services, with focus geared toward marginalized communities. My research aims to design novel techniques to run modern ML models more efficiently and devising management strategies that cater to the resource requirements posed by these models.

EDUCATION

Tufts University, Medford, MA
Ph.D. Computer Science, 2025 (expected)
Advisor: Dr. Fahad R. Dogar

Tufts University, Medford, MA
M.Sc. Computer Science, 2023
Advisor: Dr. Fahad R. Dogar

Lahore University of Management Sciences, Lahore, Pakistan
B.Sc. Electrical Engineering, 2017

PUBLICATIONS

1. **Abdullah Bin Faisal**, Noah Martin, Hafiz M. Bashir, Swaminathan Lamelas, Fahad R. Dogar “**When will my ML Job finish? Toward providing Completion Time Estimates through Predictability-Centric Scheduling**”, USENIX OSDI 2024, CA, USA, (Acceptance rate=17%).
2. **Abdullah Bin Faisal**, Hafiz M. Bashir, Ihsan A. Qazi, Zartash Uzmi, Fahad R. Dogar “**Workload adaptive flow scheduling**”, ACM CoNEXT 2018, Heraklion, Greece, (Acceptance rate=17%)
3. Hafiz M. Bashir, **Abdullah Bin Faisal**, M. Asim Jamshed, Peter Vondras, Ali Musa Iftikhar, Ihsan A. Qazi, Fahad R. Dogar “**Reducing Tail Latency using Duplication: A Multi-Layered Approach**”, ACM CoNEXT 2019, Orlando, USA, (Acceptance rate=17%)
4. Hafiz M. Bashir, **Abdullah Bin Faisal**, Fahad R. Dogar “**Network resource management as a Database problem**”, ACM SoCC 2022, CA, USA, (Acceptance rate=24%)

PROJECTS

Predictability-Centric Scheduling

Built a scheduling framework (PCS) that provides reliable job finish estimates to GPU cluster users running ML jobs.

Learning based Scheduling for Cloud networks

Designed a learning based network scheduling policy (2D) which offers tail-optimal performance across diverse (e.g., web-search, data-mining) cloud workloads.

Reducing Tail latency via duplication inside Data Centers

Helped design a job duplication strategy to alleviate the problem of tail latency in the cloud across multiple resources (e.g., storage, network)

Leveraging databases for network resource management in the cloud

Helped design a database-driven resource management framework for the cloud, capable of handling thousands of queries per second.

SOCIAL
IMPACT

Increasing AI Accessibility

I am co-leading the development and design of a WhatsApp based AI service, aimed to provide cost-optimized access to LLMs (e.g., GPT-4) for low-income individuals, via a familiar interface. The service is currently being used by over 100 users from US, Sudan, and Pakistan.

AWARDS

Loevner Fellowship Award 2019-20 (Academic and research excellence)
Deans Fellowship Award 2018-2019 (Academic and research excellence)
Deans Fellowship Award 2017-2018 (Academic and research excellence)
Deans Honor List 2014-17 (maintaining a CPGA of ≥ 3.6)

WORK
EXPERIENCE

Instructor: Intro to Machine Learning (CS135), Summer'24, Tufts
Guest Lecturer: Computing for Developing Regions (CS151), Spring'23, Spring'22, Tufts
Graduate Research Assistant, Spring'18-Fall'22, Tufts
Graduate Teaching Assistant, Intro to Machine Learning (CS135), Spring'24, Tufts
Graduate Teaching Assistant, Deep Neural Networks (CS137), Fall'23, Tufts
Graduate Teaching Assistant, Computing for Developing Regions (CS185), Spring'23, Tufts
Graduate Teaching Assistant, Computer Networks (CS151), Fall'20, Tufts
Graduate Teaching Assistant, Computing for Developing Regions (CS185), Fall'19, Tufts
Graduate Teaching Assistant, Data Structures (CS15), Fall'17, Tufts

SKILLS

• C, C++ • Python • TensorFlow • PyTorch • Ray • AWS-Lambda • NS2

REFERENCES

Dr. Fahad Dogar

Associate Professor, Computer Science department, Tufts University
fahad@cs.tufts.edu

Dr. Raja Sambasivan

Assistant Professor, Computer Science department, Tufts University
raja@cs.tufts.edu

Dr. Ihsan Ayyub Qazi

Associate Professor, Computer Science department, LUMS
ihsan.qazi@lums.edu.pk