

Kameron Shahabi

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<https://kyshahab.github.io/>

EXPERIENCE

Research Assistant – USC Computer Science Theory Group

August 2022-Present

- Conducting novel research on out-of-distribution generalization and fairness in machine learning.
- Exploring the theoretical implications of robust learning in the presence of spurious correlations.
- Analyzing implicit biases of gradient descent from the lens of stability

Research Intern – Signal Research

May 2023 – August 2023

- Performed cost analysis on scaling Signal’s secure contact discovery system to use private information retrieval (PIR) instead of hardware enclaves.
- Implemented state-of-the-art PIR system in Golang and conducted experiments on real-world data.

Sensor Fusion and Tracking Intern – Tesla Inc, Palo Alto, CA

May 2022-August 2022

- Worked on cleaning and filtering raw sensor data for autopilot pipeline.
- Implemented Python reverse-geocoder using open street map and PostGIS to detect sensor blocking objects based on car GPS data.

Research Assistant – CSI Cancer

July 2021-May 2022

- Aggregated and assessed physical activity data from over 60 patients in clinical trials to help physicians predict whether those patients will experience unplanned healthcare encounters.
- Used feature selection to identify important attributes for this classification.

Research Assistant - USC Infolab

July 2020-March 2021

- Built a co-location-based disease spread simulation using real world mobility data in over 1000 lines of C++ code.
- Trained a Hawkes-process spatiotemporal risk model using ground truth infection.
- Predicted risk of COVID-19 infection at specific locations with 50% improvement in accuracy compared to existing methods.

PUBLICATIONS

- Rambhalta, Zeighami, Shahabi, Shahabi, Liu. “Towards Accurate Spatiotemporal COVID-19 Risk Scores Using High Resolution Real-World Mobility Data.” *ACM Transactions on Spatial Algorithms and Systems*, June 2022.

EDUCATION

University of Southern California, Los Angeles, CA

- M.S. in Computer Science | expected May 2024
- B.S. in Computer Science | May 2023, *Summa Cum Laude*

SKILLS

Software

C, C++, Java, Python, Unix/Linux, PostgreSQL, React Native, Node.JS, JavaScript, Git, MongoDB, Golang

Relevant Coursework

Data Structures, Algorithms, Artificial Intelligence, Linear Algebra, Probability Theory, Computer Graphics, Operating Systems, Convex and Combinatorial Optimization, Cryptography, Machine Learning

AWARDS

- USC Provost Research Fellowship | Fall 2021, Spring 2022
- USC Viterbi Dean’s List | All Semesters