Kameron Shahabi

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EXPERIENCE

Research Assistant – USC Computer Science Theory Group
August 2022-Present

- Working with Professor Vatsal Sharan on out-of-distribution generalization and fairness in machine learning.
- Exploring the theoretical implications of robust learning in the presence of a spurious correlation.
- Designing an algorithm to mimic the group distributionally robust optimization objective without group knowledge.

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.
- Planned and executed a project to host a long-term PostgreSQL database for sensor data on AWS cloud, with Python API and Grafana dashboard interfaces.

CSCI 270 Course Producer – USC Viterbi
August 2021-May 2022

- Organized and managed over 70 students in USC's Introduction to Algorithms and Theory of Computing course.
- Trained students on course topics including greedy algorithms, divide-and-conquer, dynamic programming, and computation theory.

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.

RecoveryTime
June 2020-Present

- Rehabilitation mobile application that collects user-reported input on addiction cravings to anticipate and help prevent bad habits.
- Design and write the React Native front-end and Node.js backend to store and manipulate data in a MongoDB database.

EDUCATION

University of Southern California, Los Angeles, CA

- M.S. in Computer Science | expected May 2024
- B.S. in Computer Science | expected May 2023
- 3.91 GPA

SKILLS

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

Relevant Coursework
Data Structures, Algorithms, Object-Oriented Design, Software Development, Artificial Intelligence, Linear Algebra, Probability Theory, Computer Graphics, Operating Systems, Convex and Combinatorial Optimization, Cryptography

AWARDS

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

PUBLICATIONS

- Rambhalta, Zeighami, Shahabi, et al. "Towards Accurate Spatiotemporal COVID-19 Risk Scores using High Resolution Real-World Mobility Data." *ACM Transactions on Spatial Algorithms and Systems*, June 2022.