William Liao

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Education

University of Maryland, College Park College Park, MD (Aug. 2020 – May. 2024)

- Bachelor of Science - BS, Mathematics GPA: 3.94 / 4.00
- Bachelor of Science - BS, Computer Science
- Banneker/Key (Full Ride) Scholarship Recipient

Work Experience

Amazon Web Services, Inc.

Software Development Engineer Seattle, WA (Jul. 2024 –)

- Developed service in Native AWS to export data from an internal multi-primary regionally replicated data store to AWS S3 buckets, helping to accelerate org-wide adoption of data store. (Java)
- Designed and created operational dashboard to monitor metrics and provide alerts for system failures.

University of Maryland

Teaching Assistant College Park, MD (Aug. 2021 – Dec. 2023)

- Led discussion/lab sections to reinforce class concepts and introduce extra material.
- Held office hours; graded projects and exams.
- Classes TAed: CMSC216 - Intro. to Computer Systems; CMSC351 - Algorithms

Amazon Web Services, Inc.

Software Development Engineer Intern Seattle, WA (Jun. 2023 – Aug. 2023)

- Developed service in Native AWS to export data from an internal multi-primary regionally replicated data store to AWS S3 buckets, helping to accelerate org-wide adoption of data store. (Java)
- Designed and created operational dashboard to monitor metrics and provide alerts for system failures.

Capital One

Software Engineer Intern (Technology Internship Program - Center for Machine Learning) McLean, VA (Jun. 2022 – Aug. 2022)

- Designed and implemented dataset access service using Flask and AWS DynamoDB for real-time model serving platform. (Python)
- Trained and optimized an XGBoost machine learning model for credit card fraud detection; used Dask for parallel processing of large datasets.
- Deployed model onto production Kubernetes-based platform for use as an highly available API microservice.

Projects, Activities, and Awards

Adversarial Communication in Multi-Agent Reinforcement Learning (Jan. 2023 - May. 2023)

- Investigated the effectiveness of attention-based methods for improving total reward in Multi-Agent RL settings with benign and adversarial communication among agents.
- Designed and implemented approach in PyTorch on top of standard PPO traning algorithm.

International Collegiate Programming Contest (ICPC) Feb. 2023

- Mid-Atlantic USA Regional - Top 25%

Lakers Analysis Project

- Analyzed historical NBA team data using statistical and data science techniques to explain Lakers' underperformance relative to expectations in 2022.
- Created data visualizations using seaborn and matplotlib to aid in exposition.

Skills

Programming Languages Proficient: Python, C, Java; Familiar: R, OCaml, C++, Rust, Racket, Scheme

Technical Skills NumPy, Pandas, Scikit-learn, XGBoost, Dask, Matplotlib, Jupyter, MATLAB, LaTeX
Kubernetes, Docker, Flask, AWS s3, AWS DynamoDB, JavaFX, VSCode, Git, Agile Dev.