Nick Titterton

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Experience

Software Engineer, Amazon — September 2022 - October 2023

- Developed a per-namespace system of measuring Cloudwatch metrics across packets, network plans, and EC2 instance statistics.
- Designed and developed an encryption key storage and maintenance system, using periodic Tokio threads and DynamoDB.
- Designed a performance monitoring system with configurability and reporting across S3, EC2, CloudWatch, and Lambdas.
- Performed oncall duties, working with a diverse set of teams across satellite hardware and AWS software.

Software Engineer, Google — July 2019 - May 2021

- Helped design and develop a low cost, eventual consistency, big data storage and batch processing system uStore as part of a team.
- Automated releases using internal Google tools, programmed new features, wrote automated tests, adjusted configurations of a huge distributed system.
- Wrote documentation, architected design and wrote design documents.
- Reviewed my teammates code changes, and monitored the product as part of an oncall rotation.
- Primarily wrote code in C++, also writing in Python, Protocol Buffers, SQL, and JSON-like internal configuration languages.

Software Engineering Intern, ServiceNow — May 2018 - August 2018

- Updated AWS EC2/EBS API frameworks from Java to REST-ful Javascript on an Agile/Scrum team.

Education

University of California, Berkeley — Fall 2015 - Spring 2019

Bachelor of Arts in Computer Science, GPA 3.46

Coursework heavy in AI/ML and theory (5 grad courses), and including security, networking, OS, and EE.

Projects

Markov Chain Generator Reddit Bot

Wrote, tested, and deployed a reddit bot that scans a user's recent comments and generates a markov chain using Python Reddit API Wrapper (PRAW), AWS EC2, SQS, Lambda, and Cloudwatch.

Low-Distortion Fakcharoenphol-Rao-Talwar Trees

Implemented $O(n^2)$ low-distortion FRT trees, MSTs (Prim's/Kruskal's), and random trees using ReactJS and canvas. Also did distortion analysis using Google Colab and matplotlib.pyplot.

Skills

Languages

Python (numpy, scipy, cvxpy, TensorFlow, scikit, Pytorch, matplotlib), Rust, C++, Java, Protocol Buffers, Javascript (React, Typescript), SQL, HTML, CSS (Bootstrap), Objective-C, C, MIPS, Scheme

Tools & Misc

Test automation, build deployment and monitoring, terminal, git/version control, documentation (incl. LaTeX), distributed systems, AWS (EC2, S3, DynamoDB, Lambda, CloudWatch)