

David Gaster

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Experience

Workday, Software Engineer

SF Bay Area, CA · Sep 2019 - Present

- Architected and developed an end-to-end performance, error monitoring and alerting system, detected EC2 load balancer and worker node failures, reduced MIM response time by 20%.
- Built a static code analysis tool, testing suite and CI/CD pipeline for deploying distributed data pipelines, reduced deployment time by 60%, caught on average 5-10 errors per deployment.
- Presented the static code analysis project and its backend services to 400 employees.
- Developed a full stack website in React/Node.js for whitelisting MAC addresses on local area networks, which led to a reduction of 20+ hours of technical debt per month across 5 teams.
- Refactored and redesigned a Slack integration in AWS Lambda and reduced the code base by 30%.
- Experienced building REST API's, microservices, scalable and highly available systems.

Blitzz, Software Engineering Intern

San Mateo, CA · July 2018 - Oct 2018

- On the cloud native data replication team, customized a query parser to translate dialects of SQL.
- Automated migration of 20% of TPC-H queries from source to target data store.
- Created the abstract syntax tree for queries. Parser supports complex nested joins.

UCSD CSE Department, Academic Tutor

La Jolla, CA · Jan 2018 - June 2018

- Advanced Data Structures in C++, Object-Oriented Programming in Java
- Held office hours to assist with Binary Search Trees, Tries, DFS, BFS, Dijkstra's and Union Find.

Skills

Languages Python · Javascript · Java · C/C++ · Go · SQL

Tech Stack AWS · MySQL · React · Node.js · Jenkins

Education

Computer Science, B.S. UC San Diego

La Jolla, CA · Sep 2016 - June 2019

- Clubs & Honors: Tau Beta Pi Engineering Honor Society, Provost Honors
- Relevant Courses: Data Structures, Algorithms, Compilers, OS, ML, AI, Complexity Theory, Security, RDBMS

Projects

Automated Crypto Trading Platform, Python · Go · AWS

Jan 2021- Present

- Architected and engineered an automated cryptocurrency trading app for BTC, ETH and LTC.
- Analyzed real-time price data using the CoinbasePro websocket API and automated trading.
- Data pipeline runs analysis on time series data and sends updates using the Twilio API.

MapReduce on Distributed File System, Python

Mar 2018

- Implemented MapReduce on a distributed file system using replication and leadership election.
- Designed an algorithm to assign m map tasks and r reduce tasks to chunk files in parallel on worker nodes.
- Developed file system record append, enabling resilience to large-scale worker failures.

Compiler: Cobra Programming Language, Haskell · C

Dec 2017

- Using Haskell, built a compiler and custom programming language similar to Python.
- The language supports programming constructs including type inference, function calls, recursion, data structures (lists, tuples, trees), static/run-time type checking, and a garbage collector in C.