David Gaster

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Experience

Workday, Software Engineer   SF Bay Area, CA · Sep 2019 - Present
Integrations, Identity & Search Team
- Built high throughput data pipelines in SnapLogic to handle 10,000+ transactions per minute, distributed event streaming in Apache Kafka, Python ETL in Airflow.
- Created a modular static code analyzer and CI/CD pipeline for deploying large-scale data pipelines, reduced deployment time by 80%, caught 10-20 hard-coded references pre-deployment.
- Architected and developed an end-to-end performance, error monitoring and alerting system by designing a heartbeat algorithm to detect load balancer and worker node failures.
- Experienced developing and deploying to AWS infrastructure- ECS, Lambda, API Gateway (Swagger), RDS.
- Developed REST API's, implemented authorization & authentication- OKTA SSO, JWT security.

Blitzz, Data Engineer Intern   San Mateo, CA · July 2018 - Oct 2018
Cloud Native Data Replication Team
- Designed a query parser in Haskell to translate between dialects of SQL, ability to translate 60% of queries.
- Automated query migration from source to target data store, such as MySQL to PostgreSQL.
- Created the abstract syntax tree for queries, parser supports complex nested queries.

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 · Java · C/C++ · Go · SQL
Tech Stack	AWS · MySQL · Node.js · Jenkins · Docker · Kubernetes
Big Data	Apache Kafka · Spark · Airflow · SnapLogic

Education

Computer Science, B.S. UC San Diego   La Jolla, CA · Sep 2016 - June 2019
- <u>Clubs & Honors:</u>   Tau Beta Pi Engineering Honor Society, Provost Honors
- <u>Relevant Courses:</u> Data Structures, Algorithms, Compilers, OS, ML, AI, Complexity Theory, Security, RDBMS

Projects

Crypto Trading Algorithm, Go · ECS · Lambda · Airflow   Jan 2021- Present
- Architected and engineered an automated cryptocurrency trading app for BTC, ETH and LTC.
- Analyzes real-time price data using the CoinbasePro websocket API.
- Apache Airflow ETL pipeline runs analysis on time series data and sends SMS notifications using the Twilio API, stores data in AWS Aurora.

MapReduce on Distributed File System, Go   Nov 2020
- Implemented MapReduce on a distributed file system using Twirp RPC, 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.

Personal Interests   chess · rubik's cubes · tennis · skiing · soccer · surfing · basketball · hiking · photography