David N. Gaster

Email | Website | GitHub | LinkedIn

Experience

Workday, (Integrations, Identity & Search) *SF Bay Area, CA*

Software Development Engineer II *Oct. 2020 - Present*

- Experienced using ETL frameworks for distributed data streaming pipelines, triggered/scheduled jobs and metrics.
- iValidator: Enabled static code analysis, source code control and automated deployment in SnapLogic for 30+ citizen developers.
- Static code analysis is estimated to save $750K+ per year in resources and technical debt for all of Business Technology.
- CI/CD has cut deployment times by 80% for 40+ integrations maintained by our team, saving up to 8 hours per deployment.

Software Development Engineer I *Sep. 2019 - Oct. 2020*

- Worked as one of the lead developers on the migration of all data living in MySQL to AWS Aurora.
- Developed a SnapLogic automation for off-boarding user accounts for Asana, Slack, O365, Google, ServiceNow, Zoom, and more.
- MACtrack: React/Node.js application that saves 220 hours and $15,000+ per year in resources dedicated to manual service requests.
- Palo Alto Networks firewall blocker: refactored this critical application that protects all 18,000+ workmates from malicious domains and IP's.
- Well versed in AWS (EC2, S3, Lambda, RDS), REST API's, frontend/backend frameworks and the full software development lifecycle.

Blitzz, Data Engineer Intern *San Mateo, CA, July 2018 - Oct. 2018*

- Worked on the cloud native data replication team on a query parser in Haskell to translate between dialects of SQL.
- Automated query migration from one legacy data warehouse to another, such as MySQL to PostgreSQL.
- Created the abstract syntax tree for queries. The parser translates select, from, where, group by, having, order by, joins and case statements.

UCSD Computer Science Department, Academic Tutor *La Jolla, CA, Jan. 2018 - June 2018*

- Advanced Data Structures: C++ (CSE 100), Intro to Object-Oriented Programming: Java (CSE 11).
- Worked closely with faculty, assisted students to meet educational goals, facilitated group discussions in lecture and held office hours.

Skills

Languages Python, Java, Javascript, C/C++, Haskell, Go

Technologies AWS, MySQL, SnapLogic, Jenkins, React, Node.js, JWT Security

Education

University of California, San Diego, Computer Science, B.S. *La Jolla, CA, Sep. 2016 - June 2019*

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

Cornell University, Operations Research, B.S. Candidate *Ithaca, NY, Aug. 2012 – Aug. 2014*

- **Clubs & Honors**: Dean's List, Human-Powered Electricity Generation Team, Cornell International Affairs Society
- **Relevant Courses**: Linear Algebra, Stochastic Processes, Engineering Probability & Statistics, Differential Equations

Projects

Fox (Programming Language)

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

N-gram Machine Learning Model

- Using Python's NLTK library, I built trigram, bigram, and unigram language models.
- Implemented Laplace smoothing, analyzed the improvements on the perplexity of each dataset.
- After tuning hyperparameters, model has the ability to auto-generate real sentences.

Flashback Music

- Among a team of 5 other engineers, created a media player in Android that is similar to Spotify.
- The app supports downloading recommended songs, tracks the user's location, and automatically plays recommended music based on our algorithm. Has a sleek UI that recognizes complex swiping gestures.

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