

David N. Gaster

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Experience

Workday, SOFTWARE DEVELOPMENT ENGINEER

SF Bay Area, CA

INTEGRATIONS, IDENTITY AND SEARCH TEAM

Sep 2019 - Present

- My team develops REST API's and backend services for business intelligence and data infrastructure.
- iValidator and CI/CD
- Enabled static code analysis, source code control and automated deployment in SnapLogic for 30+ citizen developers.
- Static code analysis is estimated to save \$1M+ 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 significant time per deployment.
- Learning Extended Enterprise
- Worked with cross functional teams to deliver the integrations which are the backbone of Workday's new and improved learning platform.
- These integrations are responsible for managing all 60,000 learners' curriculums, certifications, and affiliations.
- Our team enabled Single Sign-On (SSO) for all customers and achieved 18,000 unique successful logins within the first 24 hours.
- The iValidator static code analysis project helped to catch many errors that would have arised during the release.
- MAC Address Tracker
- Developed an end-to-end centralized management website that interfaces with Aruba's ClearPass API's.
- It allows seamless modification of static host lists (whitelisted or blacklisted MAC addresses) across teams at Workday.
- This was the first website I had ever built from the ground up, which is awesome! I learned React, Node.js, and various Amazon Web Services (EC2, Lambda, S3, Secrets Manager, API Gateway and RDS).

Blitzz, DATA ENGINEER INTERN

San Mateo, CA, July 2018 - Oct 2018

- On the cloud native data replication team, I worked 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 in C++ (CSE 100), Object-Oriented Programming in 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, C/C++, Javascript, Golang, Haskell

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

Education

Computer Science, B.S. UNIVERSITY OF CALIFORNIA, SAN DIEGO,

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

Operations Research, B.S. Candidate CORNELL UNIVERSITY,

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

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