

# David N. Gaster

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## Experience

### Workday, BT (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.

### BlitzIO, DATA ENGINEER INTERN

San Mateo, CA, July 2018 - Oct. 2018

- 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 Oracle to MongoDB.
- 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