Daniel Öman

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Education

Georgia Institute of Technology — ***August 2021 – May 2025 (expected)***
B.S. Computer Science, concentrations in Intelligence (AI/ML) and Theory — 3.96/4.0 GPA
Relevant Courses: Data Structures & Algorithms, Machine Learning, Deep Learning, Computer Organization & Programming

Experience

Ditch — Atlanta, GA
Software Engineering Intern — ***September – November 2024***

- Developed and launched new features for a fast-growing early-stage fintech startup's flagship mobile app with 5k+ users automating $100k+ in debt repayment, using Flutter/Dart for the frontend and Python with GCP Run Functions for the backend.
- Led development of an automated notification scheduling, query, and delivery service using Python, Firebase PostgreSQL, and implemented notification history frontend with Dart, increasing app engagement and reducing user onboarding churn by ~20%.

Google — Kirkland, WA
Software Engineering Intern — ***May 2024 – August 2024***

- Designed and implemented a distributed load testing framework in C++ and Python to benchmark the scalability of a streaming metadata change-log service within Google BigQuery's core infrastructure.
- Designed continuous test runs as a custom development & monitoring workflow, reducing regressions by 70% before production.
- Developed a load sampling system simulating 10k+ requests/sec to identify bottlenecks in the service's read/write RPC endpoints.
- Built a multi-threaded C++ measurement system to analyze latency, throughput, and error rates, improving test accuracy by 50%.
- Led efforts to fix a critical SLO bug in the storage metadata server, eliminating error spikes by 90% with request retry logic.

Georgia Tech Efficient and Intelligent Computing Lab — Atlanta, GA
Undergraduate Research Assistant — ***January – May 2024***

- Contributed to a PyTorch toolkit used by 5+ Georgia Tech labs to train distributed Graph Neural Networks (GNNs) for applications with multiple large disjoint graphs, such as electronic design analysis and molecular modeling.
- Developed a modular data loading and transfer API and implemented GraphSAGE, improving model accuracy by 15%.

Georgia Tech College of Computing — Atlanta, GA
Undergraduate Teaching Assistant (Homework Lead) — ***August 2022 – May 2024***

- Managed a team of 40 TAs in the development and grading of 12 homework assignments for over 800 students per semester as TA Homework Lead for CS 1331: Intro to Object-Oriented Programming (Java).
- Led weekly recitations for 50 students; held 1-1 office hours 3 times a week to aid students with problem-solving and debugging.

Google — Sunnyvale, CA
Software Engineering (STEP) Intern — ***May – August 2023***

- Designed and implemented an efficient parallel data pipeline for production use, generating 70+ features to train ML models predicting Google Workspace upgrade, downgrade, and churn behaviors.
- Built pipeline using FlumeJava, a Java MapReduce framework, to extract and aggregate domain level ML features from a 500B+ webpage database, increasing customer coverage in the feature store by 20%.
- Engineered a scalable data aggregation architecture using advanced OOP patterns, reducing feature implementation time by 50% and provided an intuitive code interface for future feature store contributions.
- Improved pipeline reliability by developing a system to flush intermediate output from 10k+ processes to Spanner, preventing up to 7 days of data loss during full table scans.

Projects

Deep Learning Song Recommender | *Python, PyTorch, NumPy* — ***August 2024 – Present***

- Develop a multimodal deep learning model to recommend songs using audio, lyrics, and user history, trained on 1M+ songs.
- Leverage CNNs, pretrained BERT, and a DNN to generate embeddings, achieving 80% accuracy in predicting preferences.

Hemodynamics Calculator | *JavaScript, ReactJS, MongoDB, Express, NodeJS* — ***August 2023 – April 2024***

- Developed a full-stack app used by 10+ ICU clinicians, reducing blood flow measurement errors for 1,000+ patients annually.
- Placed 3rd out of 50 teams in the Georgia Tech CS Capstone Expo, presenting to 40+ industry professionals and professors.

Skills

Programming Languages: Java, C/C++, Python, SQL, Dart, JavaScript, LaTeX
Frameworks: FlumeJava (MapReduce), JUnit, NumPy, Pandas, Scikit-Learn, PyTorch, ReactJS, Express, NodeJS, Flutter, Flask
Tools: Git, Mercurial, Bazel, Protobuf, GCP, gRPC, Spanner, MySQL, PostgreSQL, MongoDB