Daniel Öman

dsoman24@gmail.com | (470) 553-5299 | Atlanta, GA | github.com/dsoman24 | linkedin.com/in/daniel-s-oman

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 2024 – Present***

- Develop and launch new features for a fast-growing early-stage fintech startup's flagship mobile app with 3k+ users automating $100k+ in debt repayment, by using Flutter/Dart for the frontend and Python with GCP Run Functions for the backend.
- Implement custom recommendation systems leveraging Python, Firebase PostgreSQL, and OpenAI LLM APIs to provide users with personalized app experiences, leading to a decrease in user churn by 20% and an increase in user engagement by 30%.

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 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) under Prof. Richard Landry and Dr. Aibek Musaev.
- 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

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.

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

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

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