# Daniel Öman

dsoman24@gmail.com | (470) 553-5299 | Atlanta, GA
github.com/dsoman24 | www.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* 4.0/4.0 GPA
*Relevant Coursework*: Data Structures & Algorithms, Machine Learning, Design & Analysis of Algorithms, Computer Organization & Programming, Probability & Statistics, Automata & Complexity, Number Theory, Deep Learning, Advanced Algorithms

## Experience

**PLAYERZERO** Atlanta, GA
*Incoming Software Engineering Intern* *August – December 2024*

**GOOGLE** Kirkland, WA
*Incoming Software Engineering Intern* *May – August 2024*

**GEORGIA TECH EFFICIENT AND INTELLIGENT COMPUTING LAB** Atlanta, GA
*Undergraduate Research Assistant* *January – May 2024*
- Contributed to a PyTorch toolkit to train distributed Graph Neural Networks (GNNs) for applications with multiple disjoint large graph datasets, such as electronic design automation analysis.
- Built a user-friendly modular data loading and transfer API and implemented the GraphSAGE GNN forward propagation and graph vertex embedding algorithm, improving model accuracies by an average of 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 per semester for over 800 students as TA Homework Lead for CS 1331: Intro to Object-Oriented Programming under Prof. Richard Landry and Dr. Aibek Musaev.
- Led weekly recitations for 50 students and help students with problem-solving and debugging during one-on-one office hours.

**GOOGLE** Sunnyvale, CA
*Software Engineering (STEP) Intern* *May – August 2023*
- Implemented and tested an efficient parallel-processing data pipeline being used in production to train machine learning models that predict Google Workspace account upgrade, downgrade, and churn behaviors.
- Built pipeline using FlumeJava, a Java MapReduce framework, to extract and aggregate 70+ web domain level ML features from a database containing the HTML of more than 500 billion web pages, increasing customer coverage in the feature store by 20%.
- Designed and implemented a scalable and extensible data aggregation architecture by applying advanced OOP design patterns that reduced feature implementation time by over 50% and provided an intuitive interface for future feature store contributions.
- Refactored pipeline to improve reliability by developing a system to flush intermediate output to disk across 100k+ threads during a full table scan, preventing data loss by storing more than 7 days of data progress during each pipeline execution.

**GEORGIA TECH FINANCIAL SERVICES AND INNOVATION LAB** Atlanta, GA
*Undergraduate Research Assistant (Team Lead)* *January – May 2023*
- Led a team of 4 researchers in performing sentiment analysis on earnings calls transcripts on 12 electric vehicle companies using the large language model FinBERT and natural language processing library NLTK.
- Developed a custom web scraper using Beautiful Soup to extract over 70 earnings call transcripts from The Motley Fool.
- Created dynamic visualizations from analyzed text data to conclude that 5 major US government policies drove spikes in positive sentiment in earning calls from companies that focus on electric vehicle production.

## Projects

**Hemodynamics Calculator** | *JavaScript, React, MongoDB, Express, Node* *August 2023 – April 2024*
- Developed the Hemodynamics Calculator, a full-stack application for the Emory University School of Medicine, to be used by 10 clinicians to reduce measurement error daily, critically impacting over 1,000 cardiac ICU patients a year.
- Placed 3rd out of 50 teams in the Georgia Tech CS Capstone Expo, presenting to 40+ industry professionals and professors.

**Machine Learning Soccer Prediction** | *Python, sklearn, PyTorch, NumPy, Matplotlib, Seaborn* *August – December 2023*
- Worked on a team of 5 to build and train logistic regression, random forest, and artificial neural network models using Scikit-Learn and PyTorch to predict soccer match outcomes with 70% accuracy, beating benchmark betting odds data by 8%.
- Built feature engineering strategies and conducted hyperparameter tuning to reduce overfitting, improving accuracy by ~10%.

## Skills

**Technologies:** Java (JUnit), C/C++, Python (Pandas, NumPy, sklearn, PyTorch, Flask), JavaScript (React, Express), SQL
**Languages:** Fluent in Spanish, Swedish, English
**Affiliations:** Delta Chi Fraternity (Secretary, Professional Development Chair), Society of Hispanic Professional Engineers