

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

B.S. Computer Science, concentrations in Intelligence and Theory | 4.0/4.0 GPA

2021 – 2025 (expected)

ATLANTA INTERNATIONAL SCHOOL

Valedictorian | 4.53/4.0 GPA | 45/45 points on International Baccalaureate exam, top 1% of global candidates awarded

2017 – 2021

Work Experience

GOOGLE

Sunnyvale, CA

Software Engineering (STEP) Intern

May 2023 – Present

- Designing, implementing, and testing efficient and scalable parallel-processing data pipelines using FlumeJava and MapReduce frameworks to extract and aggregate useful web-domain level signals from over 100 billion webpages
- Signals used to enhance the user and business knowledge base for Google Workspace's Growth & Revenue Optimization team's machine learning models, utilized for setting account pricing and predicting account downgrades

GEORGIA TECH COLLEGE OF COMPUTING

Atlanta, GA

Undergraduate Teaching Assistant (Homework Lead)

August 2022 – Present

- Managing a team of 40 TAs in the development and grading of 12 homework assignments per semester for ~700 students as TA Homework Lead for CS 1331: Intro to Object-Oriented Programming, under Prof. Richard Landry and Dr. Aibek Musaev
- Leading weekly recitations for 50 students and helping students with problem-solving and code debugging during one-on-one office hours
- Grading 4 exams per semester and writing auto-grader unit tests for assignments using the Java Reflections library

ERMI

Atlanta, GA

Engineering Intern

July – August 2021

- Analyzed data and created decision trees from health insurance claims data from over 1k knee surgery patients using R
- Identified the highest cost patients to target for non-surgical intervention

Engineering Intern

July – August 2019

- Analyzed 10k+ data points from a robot that diagnoses knee injuries
- Learned and used R to organize and visualize datasets in over 40 plots to assess the reliability and accuracy of the robot
- Analysis to be incorporated into research papers

GEORGIA TECH RESEARCH INSTITUTE

Atlanta, GA

Research Intern

June – July 2020

- Worked in a team of 4 to develop an app that creates a Bluetooth mesh network for emergency communication
- Implemented routing algorithms in Python and Java and ran simulations of the app to investigate network properties and stability

Leadership and Involvement

GEORGIA TECH FINANCIAL SERVICES AND INNOVATION LAB

Atlanta, GA

Undergraduate Researcher

January – May 2023

- Led a team of 4 researchers in performing sentiment analysis on earnings calls (EC) transcripts on 12 electric vehicle (EV) companies using the natural language processing model FinBERT and library NLTK
- Developed a custom web scraper using BeautifulSoup to extract over 70 EC transcripts from financial advice site The Motley Fool
- Created dynamic visualizations from analyzed text data to conclude that 5 major US government policies drove spikes in positive sentiment in ECs from companies that focus on EV production

Example Projects

Minesweeper Probabilistic Strategy (Personal Project)

December 2022 – Present

- Developed a probabilistic algorithm to solve Minesweeper games with 96%, 80%, and 30% win rates for easy, medium, and hard difficulties, significantly higher than the approximate 46%, 22%, and 13% human win rates for each respective difficulty
- Implemented gameplay from scratch in Java with JavaFX for a responsive user interface and applied graph algorithms with an object-oriented approach for game logic

Ruter-Sju Card Game Bot and Monte Carlo Simulation (Personal Project)

December 2021 – November 2022

- Designed and implemented algorithms in Python to play card game Ruter-Sju to investigate best game strategy
- Built a Monte Carlo simulation with 20k+ games and used Pandas and PyPlot libraries to analyze and visualize game data

Skills

Technologies: Python (Including Pandas, NumPy, BeautifulSoup), Java (Including JavaFX, FlumeJava, Android Studio), C, SQL, R

Languages: Fluent in Spanish, Swedish, English

Affiliations: Delta Chi Fraternity (Scholarship Chair), Society of Hispanic Professional Engineers, Consult Your Community