

Davayan Sanyal

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Education

University of Maryland, College Park

Aug 2021 - May 2025(Expected)

Dual Degree - Bachelor of Science in Computer Science, Bachelor of Science in Math, minor in Computational Finance
GPA: 3.79/4.00

Relevant Coursework: Applied Linear Algebra, Differential Equations, Advanced Theoretical Calculus, Probability Theory, Statistics, Computer Systems (C and Linux), Design and Analysis of Algorithms, Organization of Programming Languages, Advanced Data Structures, Data Science, Intro to Machine Learning, Database Design, Accounting 1, Financial Markets and Datasets, Options Theory and Derivatives

Skills

Technical - Java, C/C++, Python, MATLAB, Ruby, Ocaml, JavaScript, TypeScript, HTML/CSS, React, Angular, Flask, Express, NextJS, NodeJS, REST API, Swift, PostgreSQL, MongoDB Atlas, Supabase, IOS Development, Full Stack Development, Jupyter Notebook, Docker, SQL and no SQL, Prisma, Sequelize, Git and GitHub, Conda, LLM training, Prompt Engineering

Certifications – AWS Cloud Practitioner

Work Experience

Capital One, New York, NY

Jun 2024 - Aug 2024

Software Engineering Intern (TIP) – Returning intern, new team undecided

Capital One, McLean, VA

Jun 2023 – Aug 2023

Software Engineering Intern (TIP) - Cyber

- Developed new On-Duty status system with robust audit capabilities to support Cyber Operations and Intelligence teams, created new backend APIs to handle new on call feature for cyber analysts
- Automated assignment of new cases to cyber analysts to reduce overhead and lower latency in tracking cyber threats
- Demonstrated strong proficiency in MERN Stack: MongoDB hosted in AWS, Express, React, and NodeJS
- Processed up to 1200 new cyber alerts weekly

Capital One, College Park, MD

Sep 2022 – Dec 2022

Software Engineering Intern (Lab Incubator)

- Developed Slurp, an internal company web app used for finding acronyms. Updated functionality of frontend by adding a new Angular Component to handle file submissions by the user. Read file and used Restful API to communicate to Postgre backend
- Improved backend API functionality to accept file submissions and parsed data into PostgreSQL tables in NodeJS backend. Updated table schema by using Sequelize to implement bulk data capture tables.
- Doubled application usability for 4000 monthly users within nine weeks, enabling 60,000 searches per month

Research Experience

Research Assistant

Dec 2023 – Present

Department of Finance, University of Maryland

- Digitized historic newspaper financial data using various Optical Character Recognition open-source packages including Tesseract, PaddleOCR, docTr, and EasyOCR in Python within Conda environment, utilizing Pytorch and OpenCV
- Built a Large Language Model for further machine learning analysis and prediction in LM studio

Projects

Eventure: AI Powered Social App

Apr 2024

Partial Owner, Team Member

- Developed a beautiful full stack webapp that utilized Gemini AI to generate events happening in a city based on the user's interest. User can then join a group to do the event with new people to make friends and build connections
- Technologies Used: nextJS, nodeJS, Prisma, React, Tailwind, shadcn/ui, supabase, PostgreSQL, Gemini API

Public Square: Dining Hall Recommendation App

Mar 2023 – May 2023

Sole Owner, Developer

- Enabled users to leave and view reviews about the dining halls at the university to help other students decide whether to pay for the diner. App refreshes every day to reflect daily changes in food quality and changes in opinion.
- Lowered food waste and increased information access to students
- Technologies Used: Swift, XCode, Python, Flask, RestAPI, MongoDB Atlas

StockByte: Social Media Stock Perception Tracker

Apr 2023

Partial Owner, Team Member

- Scraped data from websites such as Reddit and use Pandas NPL analysis to show users the overall opinion of a stock by people on online forums. Compared with real stock market performance data to track correlation of opinions with real outcomes
- Won best use of MongoDB at Bitcamp UMD Hackathon
- Technologies Used: HTML, CSS, Python, Flask, NLP, Pandas, Web APIs, MongoDB Atlas