

DIVYA AGARWAL

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EDUCATION

University of Michigan | Ann Arbor, MI

Graduating May 2025

Degree: Bachelor of Science in Computer Science and Economics

GPA: 3.9

Awards: University Honors, James B Angell Scholar

Relevant coursework: Data Structures and Algorithms, Web Systems, Discrete Mathematics, Computer Organization, Human-Centered Software Development, Game Theory, Linear Algebra, Corporate Finance, Intermediate Econometrics

EMPLOYMENT

Software Engineering Technical Intern | Cisco Systems, Inc.

May 2024 - Aug 2024

- Developed an advanced chat-bot leveraging GPT-3.5 and OpenAI embedding models to enhance Retrieval Augmented Generation (RAG) capabilities.
- Utilized Java, Go, and Python to train a large language model (LLM) on a comprehensive database of API endpoints, enabling the resolution of complex, multi-part queries and maintaining conversation history.
- Integrated the chat-bot with the customer-facing product 'Nexus Dashboard', improving user interaction and support.
- Gained proficiency in using Kubernetes pods to develop, package, and deliver microservices efficiently to clients.

PROJECTS

Daily Journaling App

- Built a platform that provides daily journaling prompts for users based on different topics using React and Python
- Made use of BERT for sentiment analysis to provide users with an insight into the overall tone of their journal entries over time as well as how other users' sentiment analysis compare on that topic

MapReduce Framework and Scalable Search Engine

- Used socket programming, TCP and UDP protocols to implement a single machine, multi-process, multi-threaded MapReduce server and incorporated fault-tolerance methods to ensure smooth running of the server.
- Developed a scalable search engine akin to Google or Bing, leveraging information retrieval techniques such as text analysis (TF-IDF) and link analysis (PageRank), supported by parallel data processing with MapReduce.

Instagram Clone

- Built a full-stack web application similar to Instagram, implemented with server-side dynamic pages using React
- Gained experience with building client applications in JavaScript that use asynchronous programming by making AJAX calls to the REST API
- Supplemented the front-end features with Jinja-integrated HTML templates, implemented the back-end functionality by integrating Flask and MySQL in Python and created shell scripts for quick start-up of the application

LEADERSHIP AND EXPERIENCE

Cantor Coding and Trading - Vice President of Professional Development

July 2023 - Present

- Engaged with top recruiters for quantitative finance and software engineering to increase interest in the club and help members in securing internships
- Worked with organizational infrastructure such as Agile practices, CI/CD workflows, core repositories, and Git. Learnt how to effectively work with several project teams at once to maximize efficiency

M-etrics Club - Junior Analyst

January 2022 - Present

- Coordinated with other members in order to create projects which integrated data analysis skills with principles of econometrics to recognize correlations and trends in common economic indicators
- Analyzed pandemic data on stock prices, unemployment, and inflation using Pandas, Matplotlib, and NumPy in Python. Presented clear visualizations of economic impacts.

SKILLS

C++, C, Python, JAVA, HTML, JavaScript, CSS, STATA, Git, MySQL, React, REST APIs, Flask, Kubernetes, Go