

Adarsh Pettappa

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EDUCATION

University of Michigan

Ann Arbor, MI

Bachelor of Science in Computer Science

Expected Graduation: December 2025

- Relevant Coursework: Data Structures and Algorithms, Computer Organization, Information Retrieval and Web Systems, Software Engineer, AI Mobile App Development, Conversational AI, User Interface Development

TECHNICAL SKILLS

Languages: Python, C++/Java, JavaScript, SQL, R, Go (Golang), TypeScript, HTML/CSS, Matlab

Frameworks: PyTorch, Angular, React, Vue.js, React Native, TensorFlow, Node.js, Next.js, Figma

Developer Tools: Git, AWS (S3, EC2), MongoDB, VS code, Firebase, MS Office

Certifications: IBM Introduction to Artificial Intelligence (AI)

EXPERIENCE

Michigan Cantor - Coding and Trading Club

September 2023 – Present

Software Engineer | React, Next.js, Python, Amazon (S3)

Ann Arbor, MI

- Created a fullstack stock predictor tool utilizing **web scraping** and **NLP** techniques to analyze financial news
- Achieved **85%** accuracy by using sentiment analysis to validate model predictions against past stock performance
- Improved load times by **50%** through server-side rendering with **Next.js** and a **SQL** database for data handling

SocialTechLabs, Inc

September – December 2024

Software Engineer Intern - Backend | Python, Go, AWS(EC2), CI/CD pipeline

Remote

- Reduced time-to-market by **3+** months by resolving critical app notification issues through Agile workflows
- Accelerated release cycles by **30%** and reduced deployment failures by using **GitLab CI** to automate deployment
- Integrated AI text-to-image generation feature using **Python** and **DALL-E's (OpenAI)** pre-trained models

University of Michigan

May – August 2024

Machine Learning Research Intern | Python, PyTorch, Pandas, Matlab

Ann Arbor, MI

- Developed a machine learning model in **Python**, leveraging **CNNs** to analyze X-ray images of various materials
- Streamlined the analysis of datasets with up to **1,400** images by **30%** using **image processing** (edge detection)
- Achieved **95%** accuracy in detecting material changes using grid search and cross-validation optimization methods

Michigan Hackers - Tech Organization

January 2023 – February 2024

System Design Team Lead | C++

Ann Arbor, MI

- Facilitated biweekly meetings for **10+** people, equipping members with foundational knowledge in systems design
- Led the development of a Twitch-like streaming platform and presented it to an audience of **50+** members

PROJECTS

Breast Cancer Neural Classifier | Python, TensorFlow, Pandas, NumPy

December - January 2024

- Built a neural network to classify different types of breast cancers leveraging **TensorFlow** and **Keras** frameworks
- Attained **93%** accuracy in predicting benign and malignant tumors by applying data pre-processing techniques
- Optimized model performance by keeping track of accuracy metrics with **Matplotlib**, a data visualization tool

Google Search Engine Clone | Python, MapReduce, TF-IDF, SQL

May - September 2024

- Engineered a scalable search engine leveraging distributed systems, with search functionalities similar to Google
- Built a **FastAPI** backend and a dynamic search interface, enabling integration of search results in **JSON** format
- Enhanced search results by creating analysis algorithms to rank webpages based on the words and link structure

AI Travel Planner | Vue.js, React, Node.js, RESTful APIs, Firebase

July - September 2024

- Built an AI-powered application to generate personalized vacation suggestions, streamline vacation planning
- Created a responsive interface using **React.js** and integrated **Node.js** to fetch real-time data of hotels and flights
- Integrated **RESTful APIs** for customized recommendations, and **Firebase** for secure authentication