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 September 2023 – Present

Software Engineer | React, Next.js, Python, Amazon (S3) *Ann Arbor, MI*

- Created a fullstack stock news analyzer 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 implementing server-side rendering with Next.js and a SQL database for data management

SocialTechLabs, Inc September – December 2024

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

- Reduced time-to-market by 20% by resolving notification issues through scrum sprints and root cause analysis
- Accelerated release cycles by 30% and reduced deployment failures by using GitLab CI to automating deployment
- Integrated AI text-to-image generation feature using Python and DALL·E's (OpenAI) pre-trained models

University of Michigan May – August 2024

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 January 2023 – February 2024

System Design Team Lead | Communication, Leadership *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

AI Travel Planner | Vue.js, React, Node.js, RESTful APIs, Firebase October - November 2024

- Developed a fullstack AI travel planner, offering personalized vacation recommendations based on user preferences
- Created a responsive UI with Vue.js and integrated RESTful APIs to fetch real-time hotel and flight data
- Incorporated authentication features using Firebase Authentication and MongoDB for user data management

Open Source Project - Docker | Go, Delta Debugging, Unit testing July - September 2024

- Improved Docker Moby's system monitoring by optimizing health check intervals with a dynamic algorithm in Go
- Identified the issue in a 1,500+ line codebase by utilizing unit testing and Delta Debugging for fault localization
- Proposed an event-driven solution, reducing the frequency of health check delays and optimized testing efficiency