Nithil Eshwar Mani

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EDUCATION

- University at Buffalo 2025
  Master of Science (Data Science) CGPA: 3.7/4.0
- Anna University (College of Engineering, Guindy) 2023
  Bachelor of Engineering (Computer Science) CGPA: 3.3/4.0
- Certifications: AWS Certified Cloud Practitioner, AWS Certified Solutions Architect Associate

EXPERIENCE

Software Engineer, Green InfoTech (S-corp) - Union City, CA July 2025 - Present

- Built full-stack applications with Python and Node.js backends and React.js, TypeScript, and CSS frontends to automate paperwork and clinical workflows for healthcare providers.
- Utilized AWS for app deployment and performance monitoring, Docker for containerization, and Terraform for provisioning infrastructure, reducing monthly costs by 1200$.
- Configured CI/CD pipelines using GitHub Actions to automate building, testing and deployment.
- Built RAG systems for clinical note-taking agents and a text-to-SQL agent for patient databases; wrote 100+ complex SQL queries to train the models and improved accuracy by 25%.
- Developed an AI Call Agent for automated appointment scheduling and insurance verification using FastAPI. Reduced latency by 40% by designing RESTful APIs optimized for more specific responses.

Research Assistant, University at Buffalo - Buffalo, NY February 2025 - May 2025

- Worked on the development of UnionLabs, a cloud-based distributed platform for sharing data, code, and hardware resources for research in wireless Internet of Things.
- Built EC2-local integrations, reducing transfer failures by 40% and doubling job-throughput.
- Conducted thorough testing of back-end, database, and API endpoints using Python to ensure robustness and reliability of the platform.
- Improved overall user experience and responsiveness by 40% using React.js.
- The cloud-based remote-access solution enabled ease and efficiency, and reduced lab costs by 60%.

PROJECTS

- *Automated Data Analysis and Visualization* - Developed a full-stack web application using Python (FastAPI, Pandas), React and Typescript that performs intelligent data analysis, and visualization on CSV files, reducing analysis time by 45%. Fine-tuned gpt-oss-20b model to provide AI insights on the analyses.

- *Question-and-Answer Agent for Research Papers* - Built a Q&A agent for Research papers using Graph RAGs (knowledge graphs), Cypher for data retrieval and Streamlit for deployment to identify links between multiple papers. Improved performance by 70% compared to traditional RAGs.

- *Adversarial Training for Deep Learning models* - Fine-tuned various SOTA deep learning models with over 20000 OCT images using Pytorch to detect retinal diseases. Performed adversarial training and achieved an average improved accuracy on adversarial examples by 50%.