Tinu Vanapamula

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Education

University of Maryland, College Park — College Park, MD
*B.S. **Computer Science & Economics**, Double Major, Minor in Business Analytics* — *Graduating May 2027*
Dean's Scholar, BSE Scholars Program — *GPA: 4.00*

Technical Skills

Languages: Python, Typescript/Javascript, C/C++, Java, SQL, HTML/CSS, MATLAB, OCaml, Rust, R, Bash
Frameworks: React/Next.js, Node.js, Django, FastAPI, Flask, Spring Boot, TailwindCSS, REST, GraphQL
Developer Tools: Git, Docker, Linux/Unix, Amazon Web Services, Firebase, VS Code
Libraries: pandas, numpy, matplotlib, scikit-learn, tensorflow, pytorch, framer-motion, three.js, chart.js

Experience

Software Engineer for AI Training — May 2025 – Aug 2025
Outlier AI — *Remote*
- Enhanced the quality and accuracy of AI-generated code by rigorously debugging and analyzing edge cases
- Rapidly prototyped production-grade software to build supervised training datasets of LLMs for SWE tasks
- Passed rigorous assessments to become certified in React, Python, Docker, Git, HTML, and Mathematics

Software Development Engineer Intern — Jun 2022 - Aug 2022
International Software Systems Inc. — *Greenbelt, MD*
- Designed & built tailored full-stack web applications using Django, React.js, GraphQL, Postgres, and Hasura
- Developed custom CI/CD pipelines to deploy applications to cloud services with AWS EC2, RDS, Elastic Beanstalk, and on-site docker-based containerized clusters using custom DockerFiles

Machine Learning Research Intern — Jun 2023 - Aug 2023
University of Maryland MIND Lab — *College Park, MD*
- Produced **25+ respiratory samples** through a tailor-made controlled experiment using SPIRE health tags
- Trained and optimized deep multi-layered neural networks to accurately classify respiratory events
- **Improved collection accuracy by 50%** by developing custom scripts to reduce noise & improve labeling

Part-Time Systems Engineer — Aug 2023 - May 2025
National Institutes of Health (Contract through IntraNav) — *Bethesda, MD*
- Reduced downtime for **100+ RTLS IoT Nodes** by solving infrastructure issues, enhancing system reliability
- Secured complex architecture of MQTT nodes, redundant Linux servers, and containerized architecture
- Facilitated cross-team collaboration with the end-client, off-site engineering team, and NIH IT Department

Achievements & Projects

Multiple Awards at Hackathons/App Challenges (Best UI Hack @ Mocohacks 2021, Best in Show @ Codeday DC 2022, Public Favorite @ poolesville_hacks 2 2023, Congressional App Challenge Winner in MD-03 2019 & 2020)

Grade Melon | *React (Next.js), Node.js, TailwindCSS, Framer Motion, Chart.js, PWA* — Oct 2022 - May 2024
- Reverse-engineered our school's grades portal for a better UI/UX and calculated/optimized grade features
- **Received 850k+ unique visitors in 2023** with only a 20% bounce rate

MBHS Website | *React (Next.js), Node.js, Docker, TailwindCSS, Strapi CMS, Bash* — Nov 2022 - May 2024
- Spearheaded the development and design efforts, including the UI/UX, infrastructure, and CI/CD Pipelines
- Coordinated with school administration and IT Head for detailed requirements and constraints of the project
- **Received 150k+ unique visitors in 2024**

March Madness Leaderboard | *React (Next.js), FastAPI, Docker, pandas, scikit-learn* — March 2024 - May 2024
- Developed a grading tool for custom trained linear regression models to evaluate their performance in real-time
- Used pandas and scikit-learn and process the data and models and built a custom endpoint with FastAPI
- Built a custom leaderboard frontend with ability to view all log losses for all matchups, as well as filtering