TINU VANAPAMULA

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EDUCATION

University of Maryland, College Park (UMD) • B.S. Double Major, Computer Science + Economics
Sophomore Graduating May 2027, GPA: 4.0
Dean's Scholar, BSE Scholars Program

Montgomery Blair High School • Science, Mathematics, Computer Science Magnet Program
WGPA: 4.96, GPA: 4.0

EXPERIENCE

Part-Time Technical Engineer • National Institute of Health (NIH) Contract through IntraNav | Bethesda, MD
August 2023 - Present

- Troubleshoot and resolve issues ensuring all 100+ IntraNav IoT Nodes have minimal downtime
- Identify and solve numerous bugs and issues by updating and servicing IntraNav Ubuntu servers and UWB radios
- Coordinate with multiple teams to ensure the smooth operation of IoT infrastructure

Reverse Engineering ASPIRE Intern • Johns Hopkins University Applied Physics Laboratory (JHUAPL) | Laurel, MD
June 2023 - August 2023

- Engineered a robot with a custom autonomy algorithm to track WiFi APs using an Arduino and ESP8266
- Developed serial + web endpoints, facilitating real-time communication between client devices and the robot
- Reverse-engineered a talking Barbie doll, and disassembled code from its flash chip to identify vulnerabilities

Machine Learning Research Intern • University of Maryland (UMD) MIND Lab | College Park, MD
June 2023 - August 2023

- Collected 25+ respiratory breathing data samples through controlled experiments and SPIRE health tags
- Trained a rudimentary predictive machine learning model using Python data science libraries
- Analyzed respiratory data trends to provide valuable insights that improved the research team's understanding

Software Development and IT Intern • International Software Systems Inc. | Greenbelt, MD
June 2022 - August 2022

- Developed and deployed full-stack web applications using Django, Next.js, GraphQL, AWS EB/EC2, and Docker
- Worked with Elastic Beanstalk and EC2 instances to deploy web applications on AWS
- Increased WiFi coverage by 50% by generating heatmaps of Unifi access points to optimize access point location

TECHNICAL SKILLS

LANGUAGES: Python, Typescript/Javascript, C/C++, Java, HTML, CSS, SQL, MATLAB, R
TECHNOLOGIES: React, Next.js, Node.js, Linux, Git, Docker, Tailwind, Django, FastAPI, Pandas, Matplotlib, Scikit-Learn

PROJECTS & ACHIEVEMENTS

- Developed Grade Melon (An app that reverse-engineered our school's grades portal for a better UI/UX and calculating/optimizing grade features. This app **received 1M+ unique visitors** during its lifetime)
- Led the development and designed the UI/UX + Infra of the Montgomery Blair High School Website (mbhs.edu)
- 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)