Minal Arunashalam

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EDUCATION

George Mason University, Honors College — Fairfax, VA
Bachelor of Science in Computer Science, Accelerated Master's in CS/ML, Dean's List — *Aug. 2022 – Dec 2025*

EXPERIENCE

Wearable Developer Undergraduate Research Assistant — February 2024 – Present
George Mason University — *Fairfax, VA*
- Leading the UI/UX design process for a smartwatch tailored to help neurodiverse users succeed in the workforce
- Led research/user studies to optimize usability and enhance human-centered design
- Engineering the back end technology for the wearable device, ensuring seamless performance and security
- Developing apps for the device with Swift/SwiftUI, focusing on accessibility features and intuitive interactions

Tutoring Specialist — Sep. 2023 – Present
passCS.io — *Fairfax, VA*
- Teaching fellow undergraduate students Python, Java, C, Linear Algebra, data structures/algorithms, low-level programming, etc.
- Helped 5+ failing students master the material and pass their respective classes

Web Developer Intern — June 2023 – August 2023
Sarakku — *Ashburn, VA*
- Re-designed the website for a local startup e-commerce business
- Wrote Python scripts that automated various processes (expiry date tracking, web scraping for content, etc.)
- Utilized prompt engineering techniques to generate marketing content with leading AI tools
- Designed email marketing campaigns with HTML/CSS

PROJECTS

FinanceMaster | *React.js, Express.js, Node.js, MongoDB, HTML/CSS* — April 2024 – Present
- Developed a full-stack student budgeting web application using MERN (React, Express, Node, MongoDB)
- Saved user data with MongoDB and implemented advanced encryption and user authentication to ensure security
- Adopted Agile scrum methodologies for iterative development and rapid prototyping

QuantBot | *Alpaca Markets API, Python, PyTorch, FinBERT NLP Model* — January 2024
- Developed an ML-backed trading bot that does sentiment analysis on recent financial news and (paper) trades the SPY ETF accordingly
- Tokenized news data using the Transformers library, and analyzed the sentiments of financial news with the pre-trained finBERT NLP model
- Used PyTorch to compute the softmax probability (prediction confidence) of the model, and implemented the trading strategy using the Alpaca Markets API

NoteWizard | *Python, Flask, HTML/CSS, Bootstrap, IBM Watson API, OpenAI API* — August 2023
- Developed an LLM-backed web app that allows students to upload recorded lectures and automatically receive comprehensive summaries and notes
- Used IBM Watson and OpenAI APIs for speech-to-text and note generation
- Utilized git practices to iteratively develop functionality and deploy feature implementations

SKILLS

Languages: Python, Java, C, JavaScript, HTML/CSS, R, Swift
Frameworks: React, Node, Express, Next, Flask, Bootstrap, Tailwind, Sass
Databases: MongoDB, SQL
Deployment: AWS, Docker, Vercel
Artificial Intelligence: IBM Watson, OpenCV, OpenAI, TensorFlow, NLTK, NLP, ML, Prompt Engineering
Other: Git, CI/CD, Agile, Unit Testing, Unix