Hoang (Joe) Do

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EDUCATION

Virginia Tech   Blacksburg, VA
B.S. in Computational Modeling and Data Analytics, Minor in Computer Science   *Aug. 2023 – May 2027*
Concentration: Cybersecurity and Cryptography

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, C, C#, HTML/CSS, R, SQL
Frameworks: React, Next.js, Node.js, FastAPI, Django, Flask, Tailwind CSS, Pandas, NumPy, Scikit-learn, spaCY, Splunk, EasyOCR
Developer Tools: Git, GitHub, Docker, AWS, Azure, PostgreSQL, Vercel, Figma
Additional Skills: Project Management, Agile Development, Scrum, Kanban

EXPERIENCE

AI Integration & Full-Stack Software Engineering Intern   May 2025 – July 2025
Centennial Technologies   *Leesburg, VA*

- Eliminated tedious data entry tasks by designing and implementing automation workflow using Azure and Flask for the backend, successfully **reducing manual form-filling efforts by 95%**, and accelerated enterprise document processing for individuals and organizations.
- Solved data incompatibility by architecting a full-stack data pipeline, transforming **over 1000 raw documents** into API-ready formats for efficient integration across enterprise systems.
- Designed UI/UX from wireframes and developed a modern frontend (React, TypeScript, Tailwind) that provided an **intuitive and accessible interface, passing WCAG tests** for the AI-powered document processing system.

Lead SWE Undergraduate Researcher   Aug 2024 – Present
GrayUR's Phased Array Microphonics Team   *Blacksburg, VA*

- Spearhead a 5-member team by delegating algorithm and hardware integration tasks, concurrently researching and developing core visualization GUI using Python and PySide6, **decreasing analysis time by 80%**.
- To enhance the project's analytical capabilities, I researched, developed, and integrated a custom PyTorch model that improved data prediction accuracy by **55%** and automated a previously manual analysis process.
- Lead code reviews to improve code quality and consistency, providing feedback that reduced production bugs by an estimated **80% and fostered a collaborative environment**.

Splunk Dashboard Data Analytics Developer Intern   Aug 2024 – Present
Virginia Tech Division of Information Technology   *Blacksburg, VA*

- Enhance system monitoring by translating stakeholder needs into 15+ analytical dashboards using Splunk SPL, which reduced the identification time for critical security events by **90%**.
- Detect system vulnerabilities in real-time by developing a smart alert system in Splunk that successfully identified **over 100 critical errors and security breaches daily**, leading to **50%** decreased incident response time.

PROJECTS

Harbor - AI-powered housing agent | *FastAPI, Vite, Gemini LLM, Supabase, Figma*   September 2025

- To centralize a fragmented student housing market, developed a full-stack web app within a 3-person team that leveraged Gemini LLM to provide a **streamlined, one-stop search and contact process**.
- Bridged UI and AI by integrating a FastAPI backend with a Vite frontend, successfully implementing a hybrid search system (SQL + pgvector k-NN) that **improved search result accuracy by 60%** over standard keyword filtering alone.

SkillThread | *Flask, NLP, Next.js, Azure, Figma, PostgreSQL, spaCY*   March 2025 – May 2025

- Built a responsive and intuitive user interface with Next.js that visualized skill gaps and keyword matches, enabling users to identify areas for resume improvement in **under 60 seconds**.
- Architected a RESTful API with Python and FastAPI to power a resume analysis tool; the backend parses documents, runs a lightweight NLP model for keyword extraction, and returns a full analysis **under 2 seconds.**