

Quang Hoang

Fairfax, VA | qhoang@wm.edu | linkedin.com/in/quanghoang1 | github.com/theantigone | www.cs.wm.edu/~qhoang
US Citizen | Eagle Scout | Community Service Awards

EDUCATION

William & Mary

Bachelor of Science in Computer Science

Williamsburg, VA

Aug 2022 – Dec 2025

- **Relevant Coursework:** Software Engineering, Systems Programming, Web Programming, Data Structures, Algorithms, Operating Systems, Database Management, Applied Cybersecurity, Deep Learning

TECHNICAL EXPERIENCE

Agile Software Engineer (Academic Capstone)

Aug 2025 – Dec 2025

William & Mary

Williamsburg, VA

- Facilitated **Agile/Scrum** workflows for a 6-person team, utilizing **Jira** for sprint ticketing and **Slack** for synchronous communication.
- Managed version control via **GitHub**, strictly adhering to feature-branch workflows and conducting Pull Request reviews to resolve merge conflicts.
- Architected a containerized survey analysis platform using **Django** and **Docker**, implementing data reconciliation logic for Qualtrics datasets.
- Wrote comprehensive unit tests using the **Django Testing Framework**, ensuring regression safety for critical data parsing views.

Cybersecurity Researcher (COVA CCI)

Sep 2025 – Nov 2025

Coastal Virginia Center for Cyber Innovation

Coastal VA

- Conducted vulnerability analysis on game engines, utilizing **Cheat Engine** to reverse-engineer memory structures and analyze runtime behavior.
- Demonstrated proof-of-concept exploits (Memory Editing, DLL Injection) to bypass anti-cheat mechanisms in **AssaultCube**.
- Authored a technical research paper detailing game exploitation vectors and mitigation strategies.

PROJECTS

Generative AI & NLP Engineering Portfolio | PyTorch, Hugging Face, Pandas, OpenAI

Jan 2025 – May 2025

- Fine-tuned a **CodeT5-Small** Transformer model via **Hugging Face Trainer** to automate Python code repair, achieving **0.88 CodeBLEU** score.
- Engineered and benchmarked 5 prompting strategies (Chain-of-Thought, Few-Shot) on **GPT-4** and **Codestral** models to optimize software reasoning tasks.
- Developed an **N-gram Probabilistic Language Model** from scratch in Python, implementing tokenization and perplexity evaluation to analyze corpus statistics.

Robert's Rules of Order Online | React, TypeScript, Express, MySQL

Sep 2024 – Dec 2024

- Collaborated in a 6-person team to build a parliamentary procedure platform, specifically engineering the **Authentication** system (Login/Register).
- Developed the “Active Motions” interface using **React**, implementing nested threading for pro/con debates and sub-motion creation.
- Designed real-time voting logic and dynamic upvote/downvote/neutral state management using **TypeScript** and RESTful API endpoints.

Static Site Generator | Python, HTML/CSS, CI/CD

May 2025 – Jun 2025

- Architected a custom **Python** generator to automate the transformation of Markdown into static HTML, streamlining content deployment.
- Designed a modular templating engine to separate content from design, reducing manual coding time.
- Implemented comprehensive unit testing with **unittest** to ensure build stability and data integrity.

TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript, TypeScript, HTML/CSS, SQL

Frameworks: Django, React, Express, Flask, Vite, Node.js, PyTorch, Hugging Face Transformers

Developer Tools: Docker, Git, GitHub, Jira, Poetry, VS Code, JetBrains IDEs, Cheat Engine, Postman

Platforms: Linux, Windows, Mac OS X, Microsoft Power Platform