

Hieu Nguyen

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EDUCATION

University of Florida | Gainesville, FL

Expected December 2027

Bachelor of Science in Computer Science, Minor in Engineering Innovation

GPA: 3.98/4.0

Relevant Coursework: Data Structures and Algorithms, Computer Organization, Computational Linear Algebra, Operating Systems, Introduction to Software Engineering, Algorithm Abstraction & Design

SKILLS

Languages: JavaScript/Typescript, Python, Go, C#, C++, SQL, HTML/CSS

Technologies: React, React Native, Next.js, Node.js, Jupyter Lab, Linux CLI, Git, Github, Github Actions, Docker, PostgreSQL, JIRA, Figma, Postman, Firebase, AWS S3, Cloudflare, Vercel

EXPERIENCE

Collins Aerospace (RTX)

Melbourne, FL

Software Engineer Co-Op

January 2026 – August 2026

- Refactored a Python-based historical data matching tool using Pandas and NumPy, reducing processing time by **80%** and saving the technicians **2 hours** per week for troubleshooting failed production units.
- Developed an application launcher for an internal software using **C#** (WPF) to automatically detect and launch the correct software test version assigned to each operator, eliminating manual version selection and reducing friction during testing.
- Engineered an administrative desktop application backed by **Microsoft SQL Server** for software version management, user monitoring, and test-build assignment across production operators, streamlining the software testing process.

SwampHacks

Gainesville, FL

Technical Developer

May 2025 – March 2026

- Developed a **React** and **TypeScript** dashboard for organizers to manage users, equipment, and events, replacing paid third-party tools and reducing operational costs.
- Designed and implemented a configurable JSON-driven form builder that powered the application process for over **1,100** applicants, enabling rapid form customization without manual code changes.

Technology Executive

March 2026 – Present

- Lead a team of **7** developers responsible for SwampHacks' core technology platform, overseeing project planning, code reviews, and technical implementation of the hacker dashboard, website, check-in system, and Discord bot.
- Architect and maintain the deployment infrastructure with **GitHub Actions**, **Docker**, and **Digital Ocean** to ensure 24/7 up-time, enabling reliable delivery of event-critical services used by the organizing teams and hundreds of attendees.

Prevatt Research Group, University of Florida

Gainesville, FL

Undergraduate Researcher

August 2024 – December 2025

- Engineered a machine learning pipeline using **PyTorch** and **Numpy** to classify roof types of buildings using **3000+** aerial images from Google Maps API, achieving up to **80%** prediction accuracy.
- Optimized model performance through data preprocessing, benchmarking, and hyperparameter tuning to improve accuracy.

SOFTWARE PROJECTS

Online Chess Platform

May 2023 – August 2024

- Built a full-stack chess platform with real-time multiplayer gameplay using React, **WebSockets**, and a Rust-based chess engine.
- Deployed the platform to a DigitalOcean VPS with **Nginx** reverse proxy, gaining hands-on experience with DevOps and hosting.

Digits Classifier

May 2024 – August 2024

- Developed a desktop application in Python and Pygame that recognized hand-drawn digits in real time, achieving **~90%** accuracy.
- Implemented a neural network from scratch using NumPy, including forward propagation, backpropagation, and gradient descent algorithms for handwritten digit recognition, strengthening my foundations in machine learning theory and mathematics.