

Tyler Nguyen

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EDUCATION

University of Virginia

Charlottesville, VA

B.A. in Computer Science and Mathematics – GPA: 3.9/4.0 | SAT: 1570

Expected Graduation May 2028

- **Organizations:** Project Code (Technology Head), Organization of Young Filipino Americans, Association for Computing Machinery, Intramural Soccer & Volleyball, UVA Club Powerlifting, Phi Society Fraternity

TECHNICAL PROJECTS

Rally | <https://rally-together.com/> | <https://github.com/rallyhoohacks/rally-together>

March 2026

- Built a passive personal safety mobile app that monitors gait, ambient sound, group proximity, battery level, and past trends to automatically alert friends when someone may be in danger.
- Engineered an AI safety layer using Claude API to reason over multiple sensor signals and return progressive alert tiers, with a real-time friend tracking map, Node.js/Express backend, and Supabase for auth and live data sync.

CavRec | <https://github.com/tyl3rn/CIOManager>

January 2026 - April 2026

- Developed a full-stack Intramural Sports Management System for UVA students using Django and PostgreSQL, streamlining team registration, scheduling, roster management, and role-based Google OAuth authentication for players and captains.
- Built persistent file storage and in-app messaging using Amazon S3 and Django, with captain workflows for roster approvals, score reporting, and member communications across leadership transitions.

PROFESSIONAL EXPERIENCE

Software Engineer Intern | BNSF Railway

June 2026 - Present

- Modernizing legacy Java batch applications by migrating off WebSphere (WAS) to Spring Boot on OpenShift, including a 20-year-old centralized scheduling system supporting a \$1B+ annual capital program.

Software Engineer Intern | Booz Allen Hamilton

April 2026 - June 2026

- Architected a multi-provider LLM gateway using LiteLLM to route requests across Ollama, Gemini 2.5 Flash, and GPT-4o mini, implementing per-model and global rate limits and budget controls to govern spend across workflows.
- Engineered authentication and role-based access control with Keycloak, restricting endpoint access by user role and enforcing per-user and per-team usage limits through LiteLLM virtual keys to prevent unauthorized use.
- Built a Strands-based AI agent integrated with MCP tools and a React chat UI, adding dynamic model selection and cross-session persistence to support multi-turn workflows across sessions.

Tech Consultant Intern | MyAiPathways

January 2026 - April 2026

- Built and deployed a full-stack document automation platform on Vercel that generates offer letters for interns and client contracts, eliminating manual drafting for the company's internal team.
- Leveraged Claude Code and Cursor throughout development to accelerate feature implementation, using AI-assisted workflows to iterate quickly across both frontend and backend without sacrificing code quality.
- Experimented with prompting techniques and agentic coding tools to stay adaptive across the stack, developing an AI-first approach to ramping up on unfamiliar technologies and shipping faster.

Client Project Developer | ML@UVA

October 2025 - January 2026

- Built an automated mobile scoring app for the UVA Math Tournament, replacing a three-minute manual grading process with an end-to-end pipeline that recognizes digits across diverse competition grids.
- Designed and trained custom CNN architectures with OpenCV preprocessing to achieve 100% accuracy on slanted bubble grids and 96% accuracy in blank cell detection for handwritten competition answer sheets.
- Optimized model inference for mobile deployment, enabling offline functionality and faster processing times for competition answer sheet recognition.

Software Engineer Intern | theCourseForum

September 2025 - December 2025

- Built an automated content moderation pipeline using the Detoxify toxicity model to flag, hide, and escalate harmful submissions across 32,000 course reviews
- Implemented club ownership system using UVA NetBadge authentication allowing officers to claim and manage club pages and announcements
- Refactored front-end styles and introduced dark mode for improved usability for 10k+ user base

TECHNICAL SKILLS

Languages: Python, Java, C, C++, TypeScript, JavaScript, SQL, R, HTML/CSS, YAML, Swift

Frameworks/Libraries: PyTorch, Hugging Face Transformers, TensorFlow, Keras, Flask, React.js, Express.js, Django, Springboot, Node.js, Bootstrap, OpenCV, Pandas, MediaPipe, JUnit, Socket.IO, WebSockets

Developer Tools: Git, GitHub, Docker, Kubernetes, Rancher, OpenShift, Jenkins, Conda, VS Code, IntelliJ, PyCharm