

Cyril Melvin Vincent

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Education

North Carolina State University

Master of Science in Computer Science

May 2026

4.00/4.00 GPA

Coursework: Software Engineering, Neural Networks, Software Security, Algorithms, Game Engine Foundations

Anna University

Bachelor of Engineering in Computer Science

May 2024

8.53/10.00 GPA

Coursework: Data Structures, Operating Systems, Compilers, Database Systems, Cloud Computing, Intro to AI and ML

Technical Skills

Programming Languages: Python, Java, TypeScript, JavaScript, HTML, CSS, SQL, Bash

Technologies: Spring Boot, Node.js, Docker, PostgreSQL, Redis, GitHub, AWS, React, Next.js, Cloudflare, Git, Linux

Experience

Rocketlane

January 2024 - June 2024

Software Engineer Intern | Spring Boot, React.js, Java, TypeScript, PostgreSQL

- Reduced security vulnerabilities by **92.5%** through a custom Log4j log wrapper that efficiently sanitized user inputs
- Increased G2 reviews by 40% by designing and implementing an in-app review popup to incentivize user feedback
- Enhanced deployment tracking across environments by implementing CalVer versioning with GitHub Actions & Datadog
- Decreased page load time by 66% for a key feature by integrating a 2D paginated API, with debouncing and lazy loading

Rocketlane

June 2023 - August 2023

Software Engineer Intern | Spring Boot, React.js, Java, TypeScript

- Achieved HIPAA compliance by implementing feature flags at the account level to control external data transmission
- Accelerated releases by optimizing CI/CD pipeline with branch merge rules linked to internal ticketing system
- Automated routine data requests via Retool by creating custom API endpoints, reducing support workload significantly
- Enabled targeted marketing initiatives by implementing segmentation logic for trial and paid accounts in external software

Projects

Invite Management Discord Bot | Node.js, Docker, PostgreSQL, Rust, Redis, React.js

- Currently used by over **90,000** Discord groups, tracking over **45 million** users and **1 million** unique invite links
- Developed a Discord bot to manage server invites, track invite links, and provide analytics and utility commands
- Achieved **99.95% uptime** for the Discord bot, limiting total downtime to under 4 hours in 2024
- Enhanced bot scalability via multi-cluster sharding, enabling each shard to manage ≈ 1500 Discord groups efficiently
- Introduced a white-label system for the bot, generating revenue to cover server costs and yielding consistent cash profit

Game Engine | C++, SDL2, ZeroMQ, CMake

- Developed a 2D event-driven game engine from scratch with features such as a physics system, multiplayer support, input handling, side-scrolling, replay system, customizable frame rates and timeline speeds.
- Create a multiplayer platformer, snake, and brick breaker games to showcase the engine's capabilities

IoT Smart Lock | Python, Node.js, Next.js

- Engineered a smart lock system to prevent theft in freight trucks with internal funding from undergraduate institution
- Utilized GPS and Bluetooth to enable drivers to unlock the truck only when in proximity to predefined locations
- Implemented features such as dynamic route updates, automatic door locks, and 2-way handshake protocol for security

LMS Website | Next.js, Tailwind CSS, SQLite

- Centralized overdue assignments and course resources into a single interface with Google OAuth2 authentication
- Provided push notifications for assignments, and implemented a searchable archive of class notes for students

Leadership and Organizations

Head of Software Development, Coding Club: Co-led 14 developers in organizing workshops for over 1,000 students

Webmaster, ACM Student Chapter: Maintained the college's chapter website with updates and 10+ event information

Web Developer, Google Developer Students Club: Brainstormed session ideas and competitions for the student community

Volunteer, Youth Red Cross: Participated in multiple camps and awareness programs on health and safety initiatives