

CYRIL MELVIN VINCENT

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Education

North Carolina State University [↗](#)

August 2024 - May 2026

Master of Computer Science

Coursework: Software Engineering, Design and Analysis of Algorithms, Game Engine Foundations

Sri Sivasubramaniya Nadar (SSN) College Of Engineering [↗](#)

November 2020 - May 2024

Bachelor of Engineering in Computer Science and Engineering

8.53/10.00

Coursework: Data Structures, Internet Programming, Database Management Systems, Artificial Intelligence, Introduction to Machine Learning, Operating Systems, Computer Networks, Theory of Computation, Compiler Design

Activities: SSN Coding Club - Deputy Head of Software Development team, ACM Student chapter - Webmaster, Google Developer Students Club - Web Development team member, Youth Red Cross - Volunteer

Experience

Invite Management Discord Bot [↗](#) *Software Engineer*

August 2021 - Present

- Currently used by over 90,000 servers, tracking over 45 million users and 1 million unique invite links
- Utilized Node.js, PostgreSQL, Next.js, Rust, Redis, and Docker to develop a Discord bot that tracks invite links
- Optimized bot performance and resolved scalability challenges through multiple iterations
- Introduced a white-label system for the bot, covering server costs and yielding cash profit

Rocketlane [↗](#) *Software Engineer Intern*

January - June 2024

- Collaborated with CTO to implement an in-app review popup, boosting reviews by 40% in 2 weeks with 200+ reviews
- Developed a custom log wrapper for Log4J with custom sanitization, reducing security vulnerabilities by 92.5%
- Integrated a 2-way paginated API endpoint for resource loading, reducing initial load time by 70% for larger accounts
- Boosted PDF export microservice capacity and made the API endpoint asynchronous, reducing response times by 75%
- Streamlined the CI/CD pipeline with branch merge rules tied to the internal ticketing system, accelerating releases
- Implemented CalVer version tagging with GitHub and Datadog integration for deployment tracking across environments

Rocketlane [↗](#) *Software Engineer Intern*

June - August 2023

- Identified pain points and fixed 10+ UI/UX issues to improve user experience and increase product adoption
- Automated routine data management and retrieval tasks by creating multiple API endpoints for internal use via Retool
- Designed and implemented a scalable rearrangement feature to organize entities within the product
- Ensured HIPAA compliance by adding configurable flags to control data transmission to external services
- Enabled targeted marketing by sending custom fields to third-party software for segmenting paid and trial users

Projects

IoT Smart Lock [↗](#) *Python, Node.js, Next.js*

- Developed a smart lock system for freight trucks with internal funding from SSN College of Engineering
- Utilized a combination of GPS and Bluetooth to enable drivers to request door unlocks based on stops set by the owner
- Implemented features such as dynamic route updates, automatic door locks, and 2-way handshake protocol for security

LMS Website [↗](#) *Next.js, Tailwind CSS, SQLite*

- Serves as a secondary Learning Management System (LMS) website by scraping Moodle-based university websites
- Consolidates upcoming and overdue assignments on a single page with push notifications for future assignments
- Provides access to an archive of course notes and presentations with Google OAuth2 authentication

LUT Image Processor [↗](#) *React, Wasm*

- Developed a web app that can stylize images with LUTs (look-up tables) using WebAssembly right in the browser

AI Terminal interface [↗](#) *Golang, Charm libraries*

- Created a Terminal User Interface (TUI) for interacting with AI models using the Charm library in Golang

Technical Skills

Programming Languages: TypeScript, Java, JavaScript, Python, Rust, C, C++, Go, HTML, CSS, SQL, Bash

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

Concepts: Software Engineering, Data Science, Web Development, Cloud Computing, CI/CD, REST APIs, Microservices, Databases, Full Stack, Frontend, Backend, DevOps, Version Control, Agile Methodologies, Distributed Systems