

# Derek Corniello

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## EDUCATION

University of Cincinnati, Cincinnati, Ohio

**Expected Graduation: May 2027**

**Bachelor of Science**, Computer Science

**GPA: 3.89**

**Master of Engineering**, Software Engineering

**Relevant Courses:** Algorithms, Computer Networks, Software Engineering, OS and Systems Programming, Computer Architecture

## SKILLS

**Languages:** Python, Go, Rust, Java, C/C++, SQL, JavaScript/Typescript, HTML/CSS, C#, PHP, CypherQL, and SPARQL

**Development Tools:** git, neovim, tmux, Linux, Docker, AWS, Neo4j, RDF4J, SQLite, PostgreSQL, Vue.js, and Unity

## EXPERIENCE

**Siemens Digital Industries Software** | Software Engineering Intern

**January 2024 – Present**

- Collaborated with 3 cross-functional teams to design, develop, and test over 10 innovative software solutions
- Built REST APIs with millisecond responses to operate on 100,000+ database entries efficiently across dozens of endpoints
- Pioneered advancements in AI by implementing cutting-edge methodologies, enhancing project efficiency and accuracy
- Administered over 200 pages of documentation of projects, facilitating seamless knowledge transfer and collaboration

**University of Cincinnati College of Engineering and Applied Science** | Teaching Assistant

**August 2023 – Present**

- Translated programming topics into digestible lessons, mirroring real-world software documentation and collaboration
- Mentored 75+ students per semester, providing technical guidance and debugging support to reinforce learning
- Established reliable and timely task execution by maintaining strong communication and proactively addressing challenges
- Coordinated with instructors and peers to refine course materials, aiding in curriculum updates and the creation of resources

## PROJECTS

**8 Bit Beats** | [8BitBeats - crates.io](https://8BitBeats-crates.io) (400+ Downloads) | Rust, Terminal, Audio DSP

- A terminal-based chiptune generator with deterministic audio synthesis and real-time playback control
- Authored a multi-threaded audio generation system, using algorithms to create unique tracks in about 200 milliseconds
- Built a dynamic TUI with real-time controls, enabling users to create, preview, and replay 8-bit songs from seed IDs

**Pip Requirements Validator** | [reqinspect.com](https://reqinspect.com) (50+ Daily Users) | Go, Vue.js, AWS, File I/O

- An efficient and comprehensive web tool for developers to validate and troubleshoot all packages in requirements.txt files
- Prepared a Go REST API capable of handling over 100,000 concurrent requests with robust error handling and scalability
- Implemented a dynamic frontend, enabling responsive uploads with less than 100 millisecond latency for seamless UX

**gitcmd** | [gitcmd - crates.io](https://gitcmd-crates.io) (1,500+ Downloads) | Rust, Terminal, File I/O

- A customizable terminal designed to simplify and automate tedious git operations, improving workflow efficiency
- Developed a highly efficient application for automating git tasks in around 10 microseconds of processing time
- Engineered low-level workflows that innovate on git commands, integrating services and custom from traditional git

## AWARDS

Institute of Electrical and Electronics Engineers: Eta Kappa Nu Honors Society – Executive Officer

**October 2024 – Present**

Dean's List

**August 2023 – Present**

Cincinnatus Scholar

**August 2023 – Present**