Tyler Gorton

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Education

Iowa State University — Expected May 2026

Bachelor of Science in Software Engineering, Minor in Philosophy — *Ames, IA*

- University Honors Program | Dean's List Fall '22, Spring '23, Fall '23, Spring '25 | GPA: 3.66 / 4.00
- **Relevant Coursework**: Data Structures, Algorithm Analysis, Computer Architecture, Operating Systems, Databases, Theory of Computing, Software Architecture, Advanced Programming Techniques

Work Experience

FX Unlimited — June 2025 – Present

Software Engineer Intern — *Cedar Rapids, IA*

- Spearheaded development of a custom web application for venue management using the Salesforce platform
- Integrated data from multiple third-party APIs into a single consistent interface to provide new insights
- Explored modern technologies such as web components to design a responsive, accessible, and portable UI

Projects

Ven – Music App | *TypeScript, React, Convex, Rust, Tauri* — June 2024 – Present

- Designed a cross-platform full-stack application with React, Typescript, and Tauri
- Engineered a custom Spotify client experience via OAuth login and Spotify web API integration
- Deployed a backend with Convex, a reactive database and serverless function platform, to store user data and connect to external services

Android Ride-Sharing App | *Java, Springboot, JUnit* — Aug. 2024 – Dec. 2024

- Developed a full-stack Android app with a Springboot-powered REST API and MySQL database
- Collaborated with team members using Git and followed agile methodologies, enhancing team efficiency by 25%
- Integrated GitLab CI/CD to automate testing and deployment, achieving 90% test coverage and increasing release frequency by 60%
- Implemented a real-time messaging feature using websockets, including in-app notifications

Ray Tracing Engine | *Rust* — Aug. 2024 – Dec. 2024

- Created a simple graphics rendering engine with path tracing from scratch
- Supported rendering for complex triangle meshes, including the ability to import 3D models from external files
- Utilized advanced techniques such as Bounding Volume Hierarchies, improving performance by 75%

Pokémon Roguelike Game | *C, C++* — Jan. 2024 – May 2024

- Programmed a top-down Pokémon game with ASCII graphics, using C/C++ and the curses library
- Incorporated graph algorithms such as Dijkstra's for map generation and pathfinding
- Wrote a dynamic turn queue using a Fibonacci heap, increasing performance by 15% over the binary heap implementation

Technical Skills

Languages: JavaScript/TypeScript, Java, C, C++, Rust, SQL, HTML, CSS, Python

Technologies: React, Node.js, Express, Convex, MySQL, PostgreSQL, MongoDB, Springboot, Neo4j, Android SDK

Developer Tools: Git, Github, Gitlab, VS Code, IntelliJ, Android Studio, Bash, Postman

Activities & Involvement

Computer Science and Software Engineering Club | *Member* — Aug. 2022 – Present

Game Development Club | *Member* — Aug. 2022 – Present

Mountaineering and Climbing Club | *Member* — Sep. 2024 – Present

Boy Scouts of America | *Eagle Scout* — Fall 2021