

# Ryan Lin

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## Education

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Iowa State University, Ames, IA

B.S in Software Engineering; GPA: 3.4, anticipated graduation in December 2025

### Relevant Coursework

Algorithms, Databases, Data Structure, Computer Architect, Web Development, Embedded Systems

## Technical Skills

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**Languages: Proficient:** Java, JavaScript, C, C++, HTML **Intermediate:** Python, SQL

**Frameworks:** React.js, MongoDB, Node/Express.js, Git, Bash, Android Studio, Flutter

## Projects

NoteSync (Java, JavaScript, Maven)

August 2023 – December 2023

- Develop the app as front-end using Android Developer studio leveraging Java as the main programming language.
- Collaborated with other frontend and backend developers to build a successful API driven integration with the app backend APIs.
- Implement a file management system where users can create, delete, and organize documents and folders within a directory.
- Implement real-time collaboration using WebSocket to enable live sharing of documents between multiple users.
- Provide version control capabilities to track changes made to documents over time.
- Performed Unit and integration testing to ensure that all features of the app works as expected.

Rogue-like Pokémon Game (C, C++)

January 2024 – April 2024

- Plan the structure of the game, including classes to handle game logic, character stats, Pokémon attributes, and interactions.
- Implement a procedural dungeon generator to create randomized maps with rooms, corridors, and obstacles.
- Design algorithms for placing Pokémon, items, and trainers within the dungeon.
- Implemented pathfinding algorithm using Dijkstra algorithm to control NPC actions.

Minesweeper Game (C, C++)

April 2024 – May 2024

- Define the game's rules and mechanics. Understand how Minesweeper works, including grid generation, bomb placement, and cell revealing mechanics.
- Plan the structure of the program, including classes to handle game logic, user input, and display.
- Added additional features such as a customizable grid size and many difficulties.

Scientific Calculator (Java)

May 2024 – June 2024

- Developed a Java-based scientific calculator with JFrame, merging backend calculations into an intuitive graphical interface.
- Design a user-friendly interface with buttons for numbers, basic operations (+, -, \*, /), scientific functions (trigonometric, logarithmic, etc.), and special functions (square root, factorial).
- Implement error handling to manage invalid inputs or operations that result in mathematical errors (e.g., division by zero).

## Leadership

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West Side Market, Ames, IA

Supervisor (October 2022—October 2023)

- Manage daily operations of the convenience store and deli section.
- Ensure smooth functioning of all aspects including inventory and customer service.
- Supervise and train staff, ensuring they adhere to store policies and procedures.
- Ensure compliance with health and safety regulations in food preparation and service.

## Certifications

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Successfully completed and received certificates from Spillet Leadership University for the following courses:

- Abuse Risk Management - 9/20/2023
- Duty to Report: Mandated Reporter - 9/21/2023