# Jonah Irons

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## EDUCATION

**Purdue University** **Aug 2023 – May 2027**

*Bachelor of Science, Computer Science* | *Minor in Mathematics* | *Certificate in Music Technology* *West Lafayette, IN*

- **GPA: 3.44/4.0 | *Spring 2025 Semester Honors***
- ***Relevant Coursework:***
  - Data Structures and Algorithms
  - Computer Architecture
  - Systems Programming
  - Software Engineering I
  - Object Oriented Programming (Java)
  - Information Systems (Relational Databases)

## WORK

**MacAllister Machinery Company, Inc.** **May 2025 - Aug 2025**

*IT Helpdesk Intern* *Indianapolis, IN*

- Imaged **400+** laptops in order to upgrade MacAllister employee computers to the latest technology
- Developed a program to automatically update customer ticket information from **Microsoft Dynamics 365** to **Excel**
- Communicated with clients to resolve tickets addressing a variety of issues - from hardware to software complications

## PROJECTS

**Profpocalypse - Purdue Edition** **Jan 2025 - May 2025**

- ***Description:*** A 2D turn-based battle game set on Purdue University's main campus. The game serves as an education tool to help familiarize new or aspiring Purdue students with the culture and layout of Purdue's campus. Features a fleshed out battle system contained behind a database of Purdue trivia questions. Additionally, allows for exploration of a one-to-one replication of Purdue's campus, as well as interactable buildings, NPCs, and trivia facts located around the map.
- ***Technologies Used:*** Godot, GDScript, Git
- ***Role:*** Implemented game save logic, co-designed enemy battle scenes, created and designed all enemies, and added SFX and background music throughout the game.
- ***Outcome:*** Utilized the **Agile methodology** within a team of **6 developers** through the course of a semester – similarly, familiarized myself with using **Git** source control within a team. Additionally, I learned the process of game development and created a polished product culminating with a successful presentation to a board of professors and TAs.

**Custom UNIX Shell** **Feb 2025 - Apr 2025**

- ***Description:*** An implementation of the traditional UNIX shell. Created through a combination of **Lex, Yacc, C, and C++** – Lex and Yacc to handle command parsing and interpretation, and C/C++ for processing and command execution. Supports core UNIX functionality, including but not limited to: subdirectory browsing, wildcard expansion, subshell commands, environment variables, and commands.
- ***Technologies Used:*** C, C++, Lex, Yacc
- ***Outcome:*** Explored the **UNIX shell** and learned how the shell functions at its core - similarly, gained a deeper understanding of the synergy between Lex/Yacc and external execution programs written in C and C++.

**Simple C Compiler** **Nov 2024 - Dec 2024**

- ***Description:*** A Simple **C Compiler** utilizing **Lex** and **Yacc**. Has the ability to read and parse C programs and generate the corresponding x86-64 Assembly file for compilation and execution. Contained implementation for operations, relational expressions, loops, conditional statements, variable declaration and access, and array declaration and access.
- ***Technologies Used:*** C, x86-64 Assembly, Lex, Yacc
- ***Outcome:*** Gained understanding and experience with compilers and grammar parsing (specifically through Lex and Yacc), and learned and observed how the stack is utilized during run-time and execution within a program.

## SKILLS & INTERESTS

- **Technologies:** Java, C, C++, x86-64 Assembly, HTML, CSS, Javascript, Git, GDScript, Godot,
- **Skills:** Communication, leadership, teamwork, problem solving, optimism, flexibility
- **Interests:** Music, reading, fitness, sports, video games, computers, food!