

Zachary Garwood

563-568-8860 | garwoodzachary@gmail.com | github.com/zacharygarwood | zacharygarwood.com

EDUCATION

Iowa State University

Aug. 2020 – May 2023

Bachelor of Science in Software Engineering; GPA: 4.00

Ames, IA

EXPERIENCE

Amazon

May 2022 – Aug. 2022

Software Development Engineer Intern

Seattle, WA

- Automated the project assignment process for consultants with the use of Apex and SOQL, reducing access to an as-needed basis and improving security by 99.992%
- Migrated access from geographic-based profiles to job-based personas with the use of permission sets to better fit the needs of a new organization with over 200 users
- Fine-tuned permissions and security rules for over 20 personas across the organization to ensure thorough testing ahead of the organization's launch

Principal Financial Group

May 2021 – Aug. 2021

Software Engineer Intern

Des Moines, IA

- Streamlined the user experience in an internal bulk upload application by implementing status notifications and improving error messages with Java, resulting in positive user feedback
- Collaborated with a group of interns to develop an interactive learning experience using JavaScript, HTML, CSS, and AWS, engaging over 100 hackathon participants
- Gathered information on users from over 150,000 files with Python to create an email distribution list for an internal application utilized by my team
- Collected data on over 300 users of an internal server using Python to evaluate the potential for replacement

Iowa State University

Jan. 2021 – May 2021

Undergraduate Teaching Assistant

Ames, IA

- Taught SE185: Problem Solving in Software Engineering
- Utilized knowledge of C to build students' confidence in identifying and resolving issues in their code
- Provided guidance on computer science concepts and specific issues during weekly office hours and lab sessions

PROJECTS

Flounder | *Rust, AWS, Git*

May 2023 – Present

- Developed a UCI compatible chess engine in Rust hosted on AWS
- Generates roughly 6 million chess moves per second using an efficient bitboard-based move generator
- Implements various search and move ordering techniques such as negamax with alpha-beta pruning, quiescence search, and iterative deepening, reducing the search space by roughly 99%
- Retrieves previously evaluated positions from a transposition table, avoiding redundant computations

Autoclip | *Python, Selenium, Twitch API, Git*

Jul. 2021

- Developed a program to automate the process of posting the top Twitch clips of the day to YouTube
- Utilizes the Twitch API to gather the clips, edits the clips together with MoviePy, and then posts them to YouTube with the use of Selenium
- Accumulated over 16,000 views since its creation

Valorant Statistic Scraper | *Java, Python, Selenium, Git*

Jan. 2021

- Web scraping application that gathers statistics like rank and win percentage on players in Valorant
- Created various visualizations with the Pyplot library in Python to determine any correlations between certain statistics and the player's rank

SKILLS

Languages: Python, Java, C, C++, Rust, SQL (MySQL, PostgreSQL), JavaScript, HTML, CSS, Apex

Frameworks: Flask, Django, Spring Boot, Selenium

Developer Tools: Git, AWS (EC2, S3, RDS, DynamoDB), Postman, GitHub, VS Code, IntelliJ, Eclipse