

MICHAEL RIGALI

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Education

Oregon State University

Bachelor of Science in Computer Science

May 2021 – Present

Corvallis, OR

Experience

Gnarled Helix

Software Engineer Intern

January 2024 – Present

Boston, MA

- Contributed to the codebase of a web-based programming-focused educational video game written in TypeScript.
- Built out enemy behavior, animation sequences, UI, and in-game documentation.
- Honed skills in version control systems to manage and collaborate on project codebase.
- Translated complex technical concepts into user-friendly documentation and tutorials, enhancing educational outcomes.
- Worked with React, Redux, RTK, and a wide variety of other NPM packages in a modern Webpack build environment.

Code and Coffee

Associate Web Developer

August 2024 – Present

Baltimore, MD

- Contributed to the codebase of a web-based programming-focused educational video game written in TypeScript.
- Built out enemy behavior, animation sequences, UI, and in-game documentation.

Projects

VocabExpander | Python, Flask, REST API, HTTP Protocol

May 2024

- * Software engineering capstone project focusing on preparing students for the reading section of the GRE.
- * Practiced agile methodologies in groups, and honed skills relating to error handling, reliability management, routing..
- * Integrated a microservice architecture to handle vocabulary expansion and quiz generation, with each microservice functioning as a distinct endpoint, optimizing the overall system's scalability and maintainability.
- * Implemented a CI/CD pipeline on Heroku to automate deployment, ensuring seamless integration and delivery of updates, while maintaining high system reliability and minimizing downtime.

Cryptocurrency Trading Bot | Python, Flask, Visual Studio Code

January 2024

- * Developed and deployed an algorithmic cryptocurrency trading bot using Python, automating trading strategies on Binance and Bitmex exchanges, resulting in improved trading efficiency.
- * Designed and implemented a custom graphical user interface (GUI) with Tkinter, allowing real-time monitoring of market data and seamless interaction with the trading bot.
- * Established direct connections to Binance and Bitmex APIs, utilizing REST and WebSocket protocols to execute trades and retrieve market information without relying on third-party services.

PokeCollect | Python, Flask, MySQL

September 2023

- * Developed a Pokemon card collection app enabling users to efficiently track and store detailed data.
- * Designed and implemented a relational database schema from an ER diagram, leveraging MySQL to manage and optimize data storage, ensuring efficient retrieval and manipulation of Pokemon card information.
- * Created multiple indices within the relational database, optimizing query performance and ensuring swift access to frequently queried data, enhancing the overall user experience.
- * Formulated complex SQL queries for data manipulation and retrieval, integrating them into a web-based interface using Flask to deliver a seamless and responsive user experience.

Technical Skills

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

Libraries/Frameworks: Redux, RTK (Redux Toolkit), Bootstrap, Flask, JUnit, Pandas, NumPy, Matplotlib

Relevant Coursework

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|------------------------|-----------------------|---------------------------|-------------------------|
| • Data Structures | • Algorithms Analysis | • Artificial Intelligence | • Operating Systems |
| • Software Engineering | • Databases/Web Dev. | • Machine Learning | • Computer Architecture |

Extracurricular Activities / Awards / Achievements

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|--|---------------------------------------|--|---------------------------------|
| • OSU Programming Microcredential | • Loyola Army ROTC Academic Award | • OSU Leadership Academy and OSU Hackathon | • UMD Competition Boxing Team |
| • Loyola Army ROTC Class Rank: 1/33, Top Cadet | • President's Volunteer Service Award | • UMD Study Abroad (Genova, Italy) | • Greyhound Leadership Graduate |