

ISAAC RIDER

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Education

University of Missouri

August 2022 – May 2026

Bachelor of Science in Computer Science, Minor in Mathematics

Columbia, Missouri

Experience

Applications Development Intern

May 2024 – Present

University of Missouri – Applications Development Team

Columbia, Missouri

- Independently developed the TED course management system with minimal supervision.
- Designed and optimized UI components and backend services in Java and Vaadin Flow 24, improving efficiency of staff workflows.
- Collaborated with senior developers in code reviews, testing, and deployments to ensure reliability and maintainability.

Undergraduate Research Assistant

June 2024 – Present

Department of Electrical Engineering and Computer Science

University of Missouri, Columbia, Missouri

- Developing computational models for bladder simulation, integrating neurophysiological data.
- Implementing Python-based algorithms for analyzing neural control mechanisms in bladder function.
- Collaborating with faculty to refine methodologies and document findings.

Lawn Care (Self-Employed)

May 2018 – Present

Lawn Care Provider

Lee's Summit, Missouri

- Managed residential lawn care services, ensuring professional landscaping.
- Maintained and repaired lawn equipment, minimizing downtime and improving efficiency.

Projects

TED

May 2025 – August 2025

Java, Vaadin Flow 24, Eclipse

- Built and maintained a full-stack course management system using Vaadin Flow 24, improving usability and administrative efficiency.
- Implemented dynamic form handling and data persistence, enabling seamless course scheduling and editing workflows.
- Collaborated with team members to optimize UI components enhancing user experience.

CropAI

November 2024

Python, APIs, JavaScript, AI

- Developed an AI-powered advisory tool that provides farmers with crop care insights using image analysis and environmental data.
- Integrated Google Images, ChatGPT, OpenMETRO, and SoilGrids APIs to deliver tailored, real-time crop health recommendations.

Dungeons and Dragons Game

April 2024

Java, Eclipse

- Engineered an interactive D&D game in Java, applying object-oriented principles for modular and reusable code design.
- Implemented polymorphism and inheritance to enable diverse character classes, abilities, and gameplay flexibility.
- Created a turn-based combat system with extensible logic, allowing for future expansion of mechanics and storylines.

Technical Skills

Languages: Python, Java, C, C++, C#, SQL

Frameworks/Tools: Vaadin Flow 24, GitHub, MySQL, Oracle DB, Eclipse, IntelliJ, VS Code

Platforms/Systems: Linux, Windows

Leadership

Boy Scouts of America

August 2018 – Present

Assistant Scoutmaster

Independence, Missouri

- Mentored younger scouts through rank advancements and leadership training.
- Led outdoor expeditions, teaching survival and navigation skills.