Alex Ryse

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Skills
Programming Languages – Java, C/C++, JavaScript, Python, PHP, and SQL
Software – Git, Linux (Ubuntu), Docker, React.js, Node.js, Firebase, phpMyAdmin, and Microsoft Office

Education
Bachelor of Science in Computer Science, minor in Mathematics
Central Washington University - GPA: 3.7   September 2022 - Present
Relevant Coursework: Data Structures, Algorithm Analysis, Computer Architecture, Web Development

Experience
Teacher Assistant (Adv Data Str & File Proc), Central Washington University   April 2025 - Present
- Mentored students in applying advanced data structure concepts and file processing techniques under the supervision of the course instructor
- Graded assignments, diagnosed errors in student code, and provided actionable feedback to help debug and improve code quality

Mathematics Tutor, Central Washington University   September 2024 - Present
- Tutored university students and peers in multiple advanced mathematics courses
- Enhanced students' conceptual understanding and challenged students to find solutions on their own
- Helped me develop strong analytical, problem-solving, and communication skills

Projects
Fitness Tracker, *(https://github.com/rysealex/fitness-tracker)*
- Developed a fully functional fitness tracker web application with a React frontend and Python Flask backend, leveraging Docker to create separate Dockerfiles for each service
- Implemented user authentication and features to allow users to update and track personal fitness stats
- Enhanced proficiency in Docker, React, Flask, APIs, and containerized web application architectures

Guitar Store, *(https://github.com/rysealex/guitar-store)*
- Designed a responsive guitar store web application using JavaScript and jQuery, following the Model-View-Controller (MVC) design pattern for maintainable and scalable code
- Built the back end using PHP and integrated SQL for managing product inventory and user data, utilizing phpMyAdmin for database management

EZMath Mobile, *(https://github.com/josh-test-1120/EZMath-Mobile)*
- Collaborated in a team of four developers to design and implement a math test scheduler mobile app using Java and XML
- Developed the navigation bar UI and functionality, focusing on user experience and layout design
- Integrated Firebase as the backend database to store user data in real-time and Git for version control

Memory Allocator, *(https://github.com/rysealex/memory-allocator)*
- Created a custom memory allocator using C on the Linux platform to efficiently manage dynamic memory allocation
- Implemented a best-fit memory allocation strategy to compare memory block performance
- Gained hands-on experience in debugging and resolving pointer-related issues