Alex Ryse

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Education

Central Washington University | **Expected Graduation: Mar 2026**
Bachelor of Computer Science — Minor Mathematics | *Ellensburg, WA*
- 7 times Dean's List recipient — **GPA: 3.72**
- Courses: Data Structures & Algorithms, Computer Architecture, Web Development, Database Management Systems

Work Experience

Nomms | **Jun 2025 – Sep 2025**
Software Engineer Intern | *Ellensburg, WA*
- Engineered a **serverless automation solution** using an **Azure Function** that autonomously queries, calculates and updates the database, resulting in an estimated **98%** reduction in user-facing latency and improving page load times
- Managed **database schema** and **data migrations** using the **Visual Studio Package Manager Console** to implement new features, ensuring data integrity and a seamless transition for the production application on **Azure**
- Contributed to the **front-end development**, implementing new user-facing features to enhance the user experience
- Participated in stand-up meetings and collaborated closely with a cross-functional team within a full **Microsoft tech stack** including **ASP.NET**, **C#**, and **Bootstrap**, leveraging **Jira** for **agile development** and issue tracking

Central Washington University | **Apr 2025 – Present**
Teacher Assistant - Advanced Data Structures | *Ellensburg, WA*
- Mentored over **15 students** in **advanced data structures concepts**, providing actionable feedback on student code for **7** weekly assignments and **2** exams to **improve code quality** and **deepened students' understanding** of debugging

Central Washington University | **Sep 2024 – Present**
Mathematics Tutor | *Ellensburg, WA*
- Tutored over **100 students** in mathematics, **providing individualized instruction** that helped them solve complex problems and cultivated **strong analytical** and **problem-solving skills**, leading to improved academic performance

Projects

Wildcat Credit Union | *GitHub* | **React | Node.js/Express.js | MySQL | Docker**
- **Led a three-developer team** through the full **SDLC** to deliver a banking web application, personally developing the **Node.js/Express.js** backend, **RESTful API**, and **MySQL** database, meeting **100%** of project requirements
- Engineered **Docker** containerization, integrated the **Google Maps API** for an ATM Locator, and **provided Git training to the team**, improving collaboration and efficiency for on-schedule project delivery under a strict timeline

Fitness Tracker | *GitHub* | **React | Flask | AWS | Docker**
- Designed a full-stack fitness tracker using a **React** frontend, a **Python Flask** backend, and a **MySQL** database on **AWS RDS**, implementing **four key features**: user management, calorie counting, workout logging, and goal tracking
- Optimized application performance by **reducing redundant data fetches** by **80%** with a **React Context API** for global state management and a **JSON Web Token (JWT) authentication** system to secure all backend requests

Word Cloud Generator | *GitHub* | **Python | R-tree | Matplotlib**
- Developed a **Python-based** word cloud generator utilizing **Matplotlib** to place **API-retrieved words** in a space-filling spiral, **improving time complexity** by over **99%** using an **R-tree spatial index** for efficient collision detection

Competitions

International Drone Competition, Tokyo, Japan | *LinkedIn* | **Jul 2025 – Aug 2025**
- Collaborated with a **four-person** international team at Tokyo Denki University to develop and apply **Python-based control algorithms** using **OpenCV** for autonomous drone navigation, object detection, and QR code recognition
- Represented Central Washington University as part of a **five-person** delegation that secured **1st** in all competitions

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, C/C++, C#, SQL, PHP

Developer Tools: Git, Docker, Kubernetes, Linux, AWS, Azure, MySQL, Firebase, Jira, Microsoft Office

Libraries/Frameworks: React, Node.js, Express.js, ASP.NET, Bootstrap, Flask, jQuery, Tailwind CSS