

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, Operating Systems, Computer Architecture, 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**
- 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

Sep 2025 – Present

Undergraduate Research Assistant - Cybersecurity

Ellensburg, WA

- Partnered with a professor and **two-student** team to design and implement hands-on **Red/Blue Team lab manuals** for institutional and educational use, leveraging the **MITRE ATT&CK** framework to simulate real-world attacks
- Utilized an **ESXi** lab range to validate attack scenarios using core security tools like **Nmap**, **Snort**, and **Wireshark**

Central Washington University

Apr 2025 – Present

Teacher Assistant - Advanced Data Structures & Database Management Systems (DBMS)

Ellensburg, WA

- Mentored over **40 students** in **Advanced Data Structures** and **Database Management Systems (DBMS)**, providing actionable feedback on **20+** weekly assignments to **improve code quality** and **enhance understanding**

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