Alex Ryse

📞 (509) 992-3778   ✉ aryse54@gmail.com   in linkedin.com/in/alex-ryse   ⊙ github.com/rysealex   💼 alexryse.com

Education

Central Washington University   **Expected Graduation: Mar 2026**
Bachelor of Computer Science — Minor Mathematics   *Ellensburg, WA*
- 8 times Dean's List recipient — **GPA: 3.75**
- 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 – Dec 2025**
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

J.A.K.E. Weather | *GitHub*   **React | Flask | MySQL | Docker**
- Spearheaded development as **Project Manager**, leading a **three-developer** team using **Agile methodology** and **Notion** to manage the **SDLC**, resulting in a full-stack weather application that met **100%** of project requirements
- Engineered a **dynamic mapping system** integrating **Google Maps** and **OpenWeather APIs** and orchestrated **Docker** containerization for consistent deployment, utilizing **Microsoft Project** and **Visio** for documentation

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: Docker, AWS, Azure, Git, Kubernetes, Linux, MySQL, Firebase, Jira, Notion, MS Project, Visio

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