

Enze Ge

Software Engineer

Madison, WI, 53703

📞 608-977-3848 | ✉️ isezrage@gmail.com | [in linkedin.com/in/ezrage](https://www.linkedin.com/in/ezrage)

EDUCATION

University of Wisconsin-Madison

Madison, WI

Bachelor of Science in Computer Sciences & Psychology

Sept. 2021 – expected May 2024

- GPA 3.95/4.0, Dean's List Fall 2021, Spring 2022, Spring 2023, Fall 2023
- Courses: Networking, Database System, Operating System, Artificial Intelligence, Computer Engineering, Computer Graphics, Algorithms, Discrete Mathematics, Machine Organization and Programming

HONORS

- Phi Beta Kappa Academic Honor Society
- Government Scholarship of Zhejiang Province

EXPERIENCE

NorthStar Medical Radioisotopes

May 2022 – Apr. 2023

Software Engineer Intern

Madison, WI

- Developed a Visual Studio **code analysis** plugin that automatically detects scenarios where certain types of return values are not assigned in function calls, and used Roslyn code analysis and semantic models to provide code fixes. Worked collaboratively with team members, providing suggestions for 10,000+ lines of code and indicating 500+ parts of the code that may run into exception.
- Wrote unit tests for the Visual Studio plugin and collaborated closely with team members to streamline development and testing processes, resulting in faster development cycles and increased functional integrity.
- Created an error extractor application utilizing the Roslyn parser and semantic model to extract the names and comments of specific functions from large C# projects, storing the relevant information in a local SQLite database. By working closely with team members and communicating effectively, we eventually stored 400+ error information from the repository.
- Actively participated in the feature development of a new programming language **compiler**, contributing ideas and suggestions to the project based on team collaboration principles. Assisted team members in overcoming technical challenges and took part in the development of features like compiler comments and variable declarations, while maintaining regular communication to ensure the smooth implementation of the project.
- Utilized TCP/IP knowledge to develop the Network Simulator tool, designed to aid colleagues in debugging network distribution and packet reception issues. The tool provides a virtual network environment that simulates various network scenarios, making it easier for colleagues to develop and debug their network libraries.
- Using the WPF framework, developed a workflow diagram display and debugging tool for a company product, based on event-driven architecture to present real-time models for easy debugging and viewing. The tool enhanced customer understanding of the workflow, enabling easier product development and deployment. Through effective communication with internal teams and prompt handling of customer feedback, we provided high-quality technical support services to our valued customers.

PROJECTS

Operating System Enhancing Kernel | C, xv6

Apr. 2023 – Apr. 2023

- Worked collaboratively with team member to implement copy-on-write (CoW) fork in the xv6 operating system, reducing memory usage and improving efficiency by deferring the allocation and copying of physical memory pages for the child until required, if ever. The collaboration resulted in a faster development process and higher code quality.
- Added a reference count to each physical page descriptor in the kernel, which facilitated the mapping of the same page to multiple virtual addresses across different processes. This ensured that a physical page would not be removed from the free list until no process was pointing to it, thereby eliminating the risk of segmentation faults.
- Developed a system call to retrieve the total number of free pages in the system, which was instrumental in debugging the code and monitoring page usage. This feature enabled faster and more efficient error detection and resolution, improving the stability and performance of the overall system.

Movie Static Website | HTML/CSS/JS, Bootstrap

Nov. 2020 – Dec. 2020

- Used several libraries to implement this application, such as anime.js, Bootstrap, jQuery, etc.
- Implemented in a modern design and used Awesome font to give an aesthetic feeling to the website. Had deployed it on a cloud server

TECHNICAL SKILLS

Programming Languages: C/C++, C#, Java, Python, TypeScript, Swift, HTML/CSS/JS, R, PHP, SQL, Assembly

Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

Computer Skills: Web development via frameworks (e.g. Vue.js, React, React Native etc.) Desktop software and app development using QT designer and Android Studio. Cybersecurity understanding related to SQL injection and Binary Security. Backend development using frameworks like Flask or Java Spring. .NET framework.