

# Enze Ge

📞 608-977-3848 | ✉ [izezrage@gmail.com](mailto:izezrage@gmail.com) | 🔗 [linkedin.com/in/ezrage](https://www.linkedin.com/in/ezrage) | 🌐 [roaming-debug](https://roaming-debug.com) | 👤 [izezrage.com](https://izezrage.com)

## EDUCATION

---

### University of Wisconsin-Madison

Madison, WI

*Bachelor of Science in Computer Sciences & Psychology*

Sept. 2021 – May 2024

- GPA 3.94/4.0, Dean's List Fall 2021, Spring 2022, Spring 2023, Fall 2023, Spring 2024
- Courses: Compiler, Big Data System, Networking, Database System, Operating System, Artificial Intelligence, Computer Engineering, Computer Graphics, Algorithms, Discrete Mathematics, Machine Organization and Programming

## EXPERIENCE

---

### Zhuyin Tech

May 2023 – July 2023

*C/C++ Software Engineer Intern*

Shanghai, China

- Implemented strict rules for the graph components, ensuring that only compatible graph nodes could connect, which reduced invalid connections by **10%**. This enabled users to visually design and execute trading rules, resulting in a **15%** decrease in execution errors and enhancing overall system robustness by **20%**. Refactored the procedural code into an object-oriented programming model improving code extensibility and maintainability
- Designed a data pipeline system for Nvidia Jetsons using in-house codes for algorithmic trading that leverages data from various data source, to pre-process, data transform, action inference, and post-processing, and worked with XFNTeam providing the data for ML team for mode training.
- Set up a new project development environment on Nvidia Jetson, unblocked new feature development such as GPU acceleration, increased team velocity, as well as created wiki for teammates and helped them ramp up quickly. Successfully transitioned the old build system to CMake to integrate the vcpkg package management system. This migration improved the efficiency of managing libraries and significantly increased automation within the project.

### NorthStar Medical Radioisotopes

May 2022 – Apr. 2023

*Software Engineer Intern*

Madison, WI

- Improved quality and security of code by developing an IDE code analysis plugin that identifies return values not assigned in function calls, analyzed **10,000+** lines of code, and identified **500+** potential exceptions. Created unit tests for the plugin project, increasing the test coverage by **60%** and improving development speeds and code quality.
- Developed features for a new programming language compiler with downstream team and assisting in developing tokenization by using finite state machines and building symbol tables, resulting in enhanced runtime safety by eliminating recursion.
- Assisted field developers to identify error messages sent by pharmacy automation systems by developing an error extractor application using the Roslyn parser. This tool extracts and store function names and comments from large C# projects in a local SQLite database. It helps quickly debugging in the field by sharing **400+** error information in our codebase.
- Created a TCP/IP network simulator to debug network distribution and packet reception issues for our distributed backend. It verifies API results and data format, ensure backward compatibility, and enable data visualization by generating virtual data for product machine components.
- Refactored outdated workflow diagrams using modern WPF, enabling customers to check real-time component status, which improved internal development efficiency and enhanced customer understanding of the product workflow. Conducted usability tests with team members and gathered feedback for iterative improvements.

## PROJECTS

---

### Comprehensive Weather and Information Platform | *Kafka, Docker, gRPC, Web, Bootstrap* Aug. 2023 – Dec. 2023

- Designed a Kafka-based system for streaming and processing daily weather data, ensuring data integrity with exact-once semantics and atomic JSON file updates, and encoding data as gRPC protobuf messages for real-time statistical analysis.
- Optimized network configurations, use in-memory data stores like Redis for interim data processing, implemented back-pressure mechanisms in Kafka to handle spikes efficiently, and fine-tuned JVM settings for Spark and Cassandra for optimal performance.
- Computed and visualized real-time weather summaries such as average max temperatures using Matplotlib, showcasing proficiency in data processing and visualization tools.
- Developed a sleek, responsive user interface to display weather information, leveraging libraries like anime.js, Bootstrap, and jQuery for modern design elements and utilizing Awesome font for enhanced visual appeal.

### Network Intrusion Detection System | *Pytorch, Docker, Python*

Dec. 2023 – Dec. 2023

- Developed and trained machine learning models to predict benign or malicious network traffic with an accuracy threshold of **88%**. Launched 5 experiments, including decision tree and neural network models for binary and multiclass classification.
- Utilized scikit-learn and PyTorch libraries to build and optimize machine learning models, demonstrating proficiency in popular deep learning frameworks.

## 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, Spring 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.