Yizheng (Jerry) Shi

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Education

Yale University **Sep 2023 – May 2025**
Master of Science in Computer Science; Full Tuition Scholarships *New Haven, CT*

University of Wisconsin-Madison **Sep 2020 – May 2023**
Bachelor of Science in Computer Science; GPA: 4.0/4.0 *Madison, WI*

Relevant Courses: Data Structures, Algorithms Analysis, Operating System, Database Management System, Machine & Systems Programming, Computer Network, Artificial Intelligence, Computer Vision, Software Engineering

Work Experience

Barry-Wehmiller **May 2023 – Aug 2023**
Software Engineer Intern *Madison, WI*

- Built and published an IIoT Dashboard on Edge Device to synchronously monitor hundreds remote PLC sensors status
- Developed an engaging user interface using C#, Blazor, and .NET to achieve customization and backend interaction
- Applied Nginx as Reverse Proxy and Load Balancer for Grafana and NVR servers on Docker Containers
- Deployed NVR and PLC data to InfluxDB, resulting in a 40% improvement in failure identification and troubleshooting efficiency through enhanced timestamp rollback capabilities
- Incorporated scripts using Python and PowerShell to log the client interactions events from remote Edge PC, and developed a unified and centralize Log library to reach high extensibility and maintainability

Yin's Machine Learning Research Group **May 2022 – Aug 2022**
Undergraduate Researcher *Madison, WI*

- Implemented and trained Mutual Information Regression model in Supervised Learning to recognize the pattern between DNA Sequence and Covid-19 symptom, with 74.2% accuracy on 5-fold nested Cross-Validation
- Designed and trained a CNN with t-SNE dimension reduction for defective body cells image classification with 94.7% accuracy, and relied on SHapley Additive exPlanations to visualize defective probability for each pixel
- Applied Sobel, Canny, GLCM, Gaussian Markov Random Field for image process, edge detect, and feature extraction

FIMEC Computational Research Group **Jan 2022 – May 2022**
Undergraduate Researche *Madison, WI*

- Applied C++ Object Oriented Design with Geant4 to simulate the passage of radiation through human tissues
- Designed Geant4 radiation Interface and APIs for future Extension and Sustainability
- Developed Python scripts to collected data from MySQL Database to conduct Statistical Analysis and Visualization

Projects

OS Unix CLI - *C, Linux, OS, Python* **Oct 2022**

- Built a Shell and Command Line Interpreter (CLI) that accepts multiple commands at a time using C system calls
- Implemented Multi-Process architecture in shell to enable sequential execution and input/output redirection efficiently
- Developed Two-phase Locking to achieve Consistency in Redirection, Interactive If statement, and Log Traceback features

React Delivery App - *React.js, Python, REST API, MongoDB* **Jan 2022**

- Developed a full-stack project relies on React.js, Node.js, antdesign, mongoDB for food delivery
- Upgraded from class-based State to React useState Hooks to achieve efficient page redirection and interaction
- Used REST API to achieve data interaction and transformation between front and backend by HTTP request/response

Technical Skills

Languages: Python, Java, C/C++, C#, HTML/CSS, JavaScript, SQL, React.js

Developer Tools: VS Code, Docker, Eclipse, Microsoft Azure

Technologies/Frameworks: Linux, .NET, GitHub, JUnit, Agile, OOP