

Zihan Xu

Full-Stack Engineer

Software Engineer with hands-on experience specializing in front-end development, data analysis, and system optimization. Proven track record of enhancing web applications and analyzing data for performance improvements, including increasing user engagement and optimizing network performance.

 zihan.xu505@gmail.com

 +1 7819214601

 Boston, MA

 linkedin.com/in/zhxu

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Vue

Web Technologies: React.js, Vue.js, Git, Node.js, Express.js, iOS, Android, GPU Computing, Jupyter, HTTP, TCP

WORK EXPERIENCE

Research Assistant

Northeastern University

09/2023 – present

Onsite, United States

Summary: Extensive experience in data visualization, big data, machine learning.

- Analyzed two large-scale driving datasets, covering a total distance of over 1,446 kilometers and containing more than 500,000 records, to deeply investigate the instability of mobile networks in high-speed moving environments.
- Developed Python scripts to process and visualize over 13GB of network performance data. Independently created a detailed map of U.S. population density and county divisions, accurately marking locations of low network throughput using geographic coordinates. Implemented visualization of network throughput fluctuations and sustained low performance over periods.

Software & Hardware Engineer Intern

Dredging National Engineering Research Center

06/2023 – 08/2023

Onsite, China

Summary: Hardware & Software Desire. Participated in the development of a vibration detection device and spectrum analysis system for dredger rotating equipment.

- Designed a 16/32-channel 128Khz vibration detection solution, focusing on in-depth analysis of ARM, FPGA, DSP, and ADC chips to align with project specifications, showcasing advanced information processing skills.
- Conducted spectrum database requirement analysis and design, independently engineered database architecture and protection features to meet technical and performance demands, ensuring robust and compliant data management.
- Utilized software to draft the software framework of the vibration monitoring system, optimizing interface and workflow to enhance potential system usability and efficiency.

Front-end Engineer

Great Wall Computer Software and System Co., Ltd.

09/2021 – 05/2022

Onsite, China

Summary: Developing responsive front-end pages based on requirement specifications and prototype designs.

- Contributed to the intelligent upgrade project (fee management module) of the National Intellectual Property Administration (NIPA) patent examination and retrieval system, focusing on front-end development and improving system efficiency by 25%.
- Utilized Vue.js and other relevant technologies to complete project development according to design specifications, enhancing user interface responsiveness and reducing page load times by 30%.
- Collaborated with UI designers, product managers, and back-end developers, resulting in a 15% reduction in development time and ensuring project milestones were met effectively.
- Ensured high-quality, efficient, and timely delivery of project output, addressing issues promptly and contributing to a successful implementation that streamlined patent examination processes.

EDUCATION

M.S in Electrical and Computer Engineering

Northeastern University

09/2024-05/2025

Boston, MA, United States

B.E in Internet of Things Engineering

HUC

09/2017-06/2021

Harbin, China