ZHENQI WANG

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EDUCATION

University of Michigan(UM), Ann Arbor, MI

Bachelor of Science in Computer Science, Minor in Music(GPA: 3.96/4.0)   Exp. May 2026

Course Highlight: Data Structure and Algorithm, Machine Learning, Web System, Logic Design, Computer Organization, Agent-based Modeling, Multivariable Calculus, Linear Algebra

SKILLS

Programming Languages: C++, Python, JavaScript, HTML/CSS, Verilog, SQL, R
Tools and Frameworks: React, ReactNative, Express.js, Flask, Figma, Scikit-learn, Pytorch, SPSS, LaTeX, Git

WORK EXPERIENCE

University of Michigan Transportation Research Institute(UMTRI)   May 2024 - Present
Software Engineer Intern
- Design and develop a cross-platform app using React Native and Figma, serving as a customizable research toolkit for transportation studies.
- Collect sensor data, perform sensor fusion filtering, prototype, and unit test the app.
- Employ Agile methodology to manage tasks and ensure effective team collaboration.
- Conduct user research, gather user feedback, and participate in lab experiments with fellow researchers.

Affirmative (Healthcare Start-up)   Sep 2023 - Feb 2024
Software Engineer
- Develop a transgender healthcare website with *Python Flas*k that includes searching, rating, ranking functions to assist the community better identify healthcare resources
- Collaborate on a team with different background(business, design, engineering) to conduct user research, collect data, building business model, developing, debugging, and testing
- Awarded first place in Tech+Innovation Jam 2023 with $5k prize and first place in Michigan Business Challenge 2024 with $15k prize

PROJECT EXPERIENCE

Passwordless Authentication Initiative, Jonetix Start-up   May 2024 - Aug 2024
- Led the implementation of a passwordless authentication system using the FIDO method integrated with WebAuthn, employing cryptographic techniques to enhance security and user convenience.
- Developed a web demonstration platform utilizing React for the frontend, Express.js for the backend, and Firebase for database management showcasing the innovative authentication process.

Medical Image Analysis for Tumor Prediction, MDP   Jan 2023 - Dec 2023
- Trained a machine learning model with H&E and ISH images from the IVY GAP database to predict potential tumor
- Executed image segmentation, tiling, convolutional neural network(CNN), and verification using *Python* and Scikit-learn for robust model development

FPGA-based Four-Function Calculator Design, EECS 270, UM   Apr 2024
- Designed and implemented a four-function calculator using *Verilog* and Quartus Prime for the Altera DE2-115 FPGA development board.
- Integrated arithmetic logic unit (ALU) functionality for addition, subtraction, multiplication, and division operations.

ACTIVITIES

Microsoft, Technology Education and Learning Support, *Teaching Assistant*   Sep 2023 - May 2024
UM, Department of Mathematics, *Math Tutor*   Sep 2023 - May 2024