XIWEN WEI

xiwenwei@utexas.edu | +1 7348829746 | 1760 Broadway St., Ann Arbor, MI

EDUCATION

University of Michigan, Ann Arbor Ann Arbor, Michigan
B.E. in Electrical Engineering, **GPA**: 4.0/4.0 May 2023, Expected
Relevant coursework: Advanced & Introductory Embedded System Design, Computer Architecture, Data Structure and Programming, Embedded Control, Data Mining, Control Theory, Linear Algebra, Digital Signal Processing, Digital Integrated Circuit.

Shanghai Jiaotong University Shanghai, China
B.E. in Electrical and Computer Engineering, **GPA**: 3.56/4.0 Sep 2019-Aug 2023
Relevant coursework: Computer Architecture, Analog Circuit, Electromagnetics, Logic Design, Probability and Statics, Signal and System, Programming and Data Structure.

ACADEMIC EXPERIENCE

University of Michigan, Ann Arbor Ann Arbor, MI
Research Assistant, Advisor: Dr. David Blaauw *May 2022 – Present*

- Worked in the "M3 Monarch Migration" team to build tiny sensors that can be placed on the butterflies and collect data to extrapolate the exact path of their migration.
- **Troubleshot** the crystal timer failure and reduced the sensors' error by **83%**. Simulated the timing chip in MATLAB. Calibrated the timer by implementing a PID controller by C language in the real system.
- Collaborated with researchers from **multiple disciplines** and presented to the team on a weekly basis to exchange ideas and solve unexpected problems.

University of Michigan, Ann Arbor Ann Arbor, MI
Research team member, Advisor: Dr. Jingwen Hu, Dr. Monica Jones *Jan 2022 – Present*

- Worked in the "Adaptive design for mobility safety" multi-disciplinary team.
- Processed and landmarked medical images (CT, MRI scans) using image processing software (Mimics, Hyper Mesh) to quantify the 3D geometries of human skeleton and internal organs.
- Developed a **statistical model** of thoracic spine geometry in MATLAB using statistical shape analysis techniques (GPA, PCA and regression). Conducted mesh morphing to change a baseline model into personalized geometry targets.
- Presented to the faculties and students on the MDP Design Expo to exchange research ideas.

University of Michigan, Ann Arbor Ann Arbor, MI
Research Assistant, Advisor: Dr. Mary-Ann Mycek *Dec 2021 – Apr 2022*

- Worked with a PhD student on the "Development and optimization of an open-source toolkit for analysis of diffuse optical signals in biological media" project.
- Improved the computational speed in layered diffusion analysis for over **10%** by optimizing memory management.
- Implemented a benchmark CI tool to detect performance regression by adapting the package benchmarking tool for Julia package to this toolkit.
- Updated the user documentation to keep it consistent with software updates and corrected errors in current doc.

PROFESSIONAL EXPERIENCE

University of Michigan, Ann Arbor Ann Arbor, MI

Instructional Aide (Electrical Engineering Systems Design II) *Jan 2023 – Apr 2023*

- Organized weekly lab sessions to help students with lab tasks and debugging.
- Held open labs to help students with the final design project and answer questions.
- Held 2 Design reviews and 2 milestone reviews towards the final design project with other teaching staffs.

Soudronic (Guangzhou) Metal Packaging System Ltd. Guangzhou, China

Electrical Engineer Internship *Jan 2021 – Feb 2021*

- Built the power distribution system of 2 machines based on circuit diagrams to complete the orders.
- Customized a new component with a mechanical engineer to make the maintenance of machine easier and developed schematics of the component with Solidworks.
- Worked on a standard stock management system to enhance customer experience and increase sales.

Shanghai Jiaotong University Shanghai, China

Teaching Assistant (General Chemistry) *Sep 2020 – Dec 2020*

- Directed discussion class for over 30 students once a week to help them with their chemistry study.
- Graded homework and designed exam papers with other teaching staffs.
- Collaborated with professors and co-workers to keep improving the teaching methods.

SKILLS

Technical: C, C++, MATLAB, Python, R, Verilog HDL, Unix, Cadence, Julia.

Language: Chinese (native), English (proficient, GRE: 333 + 4.0, TOEFL: 107).