Yixin Xiao

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EDUCATION

University of Michigan, Ann Arbor

- Major: Computer Science Engineering
- College of Engineering | GPA: 3.94 / 4.00
- Expected Graduation: May 2021
- **Relevant Coursework**: Data Structures and Algorithms, Web Systems, Computer Security, Computer Organization, Matrix Algebra, Discreet Mathematics, Underwater Vehicle Design

SKILLS & ABILITIES

Related Computer Skills

- C++, Python, JavaScript (React, Bootstrap), HTML/CSS, Fortran, MATLAB, Linux, Git, Excel, Access, SharePoint, Flow

Languages

- **Chinese** – Native, **Spanish** – 5 Years/ Conversational

WORK EXPERIENCE

Applied Research Associates

Scientific Programming Software Engineer   **May 2019 - August 2019**

- **Merged** two separate code databases based on a simulation program with over 100,000 lines of code and 20-30 years of development.
- Reconstructed simulation program as a **Dynamic-Link Library** (DLL), allowing for multiple driver programs to use specific simulation components and functions.
- Built functionality of existing GUI for the simulation program into the DLL to maintain modern additions made.
- Developed an **API** for the new simulation program with categorized **API calls**, granting users ability to run simulations with unique parameters and manipulate output data.
- Revamped the program's I/O system by transferring data to memory, increasing user flexibility for output data management.

Crowds and Machines Lab

Undergraduate Research Assistant   **September 2018 - Present**

- Researches the use of **active learning** to create a **machine learning model that interchanges active learning frameworks**.
- Worked with **Deep Learning** via **Pytorch** to develop a flexible **Convoluted Neural Network (CNN**) wrapper class in scikit-learn interface, allowing my team to easily switch active learning frameworks and test our hypothesis.
- Implemented text **datasets** such as Twenty Newsgroups as inherited classes of the main Data Loader class, expanding the experimental pipeline as well as allowing my team to evaluate the performance of Active Learning strategies on text data.
- Configured wrapper class to work on both **CPU** and **GPU (CUDA)**, boosting the speed and efficiency of testing.

Posterity Group, LLC

Project Management / IT Intern   **June 2018 - August 2018**

- Worked with CEO and COO to address core issues associated with the business hiring process. Applied **Poka Yoke** and other **Six Sigma** concepts, mixed with weekly meetings, to dissect and improve the process.
- Leveraged **JavaScript** to **automate internal documents** used by multiple departments to expedite office workflows as well as enhance error-prevention.
- Used **Microsoft Flow** to **automate business workflows** that achieved more efficient work cycles between PM and HR departments.

University of Michigan

Undergraduate Research Assistant   **September 2017 - April 2018**

- Researched computer driven tools' impact on the efficiency of the domestic manufacturing process and industrial design.
- Utilized Apple's **Augmented Reality** kit to develop an **AR iOS application**, effectively building the foundation for future research.
- Tested the **Arduino's** capability in enabling a previously non-existing **Bluetooth functionality** in daily machinery.

LEADERSHIP/EXTRACURRICULAR

Michigan Hackers

Web Development Core Member   **September 2018 - Present**

- Leverage **JavaScript** and **React** to develop user-friendly review pages, completing the main frontend component of the web app.
- Utilize **Bootstrap** to create **interactive** and **stylized** components, increasing user-engagement.
- Communicated with both the frontend and backend team to construct the application architect from the ground up, including the API used as well as the application framework.

Tau Beta Pi (Engineering Honor Society)

Professional Development Chair   **January 2019 - Present**

- Created networking event involving icebreakers and post-event activities which allowed new members of the society to meet their peer mentors, as well as interact with each other. The success of the event increased our new member retention.
- Proposed idea of TBP-sponsored cover letter workshops after realizing the lack of them on campus. Set up the foundations of workshop, including its structure and resources to contact so that it can be implemented next semester immediately.