XIYAN (HENRY) MAI

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EDUCATION

Bachelor of Science in Biomedical Engineering.	GPA: 3.56
University of California, Davis	Graduated
Master of Science in Biomedical Engineering.	
University of California, Davis	Expected graduation date: July 2021

SKILLS

- CAD with SolidWorks and Autodesk Inventor
- MATLAB signal analysis and modelling
- Python and C++
- Metal machining and laser cutting
- Micro fabrication

- PCB design and assembly
- 3D printing with Formlabs
- MS Office: Word, Excel, and PowerPoint
- Adobe: Photoshop and Premiere
- Calligraphy

EXPERIENCE

Research Assistant
Micro-Nano Innovations Lab, *UC Davis BME Department*   Nov 2019-current
- Developing automated systems for wet lab procedures capable of high-precision sample handling, utilizing robotic arms, Arduino, pressure controllers, microfluidics, and Python programming.
- Fabricating microfluidic devices with laser cutting and 3D printing technologies.
- Researching the FDA Emergency Use Authorization's standard requirements for ventilator device, including ISO 13485, IEC 60601-1, ISO 80601-2.
- Developed an imaging system for Competitive ELISA color detection.
- Participated in a pneumatic BVM-based ventilator project (AmbuBox) in response to COVID-19 pandemic.

CAD Drafter
R&D Department, *TacSense Inc.*   July 2020-Dec 2020
- Assisted the R&D team in the housing design of wearable devices
- Created sketches for device appearance and utilized CAD software to generate 3D models.
- Provided 3D printing consultation service to the R&D team.

Teaching Assistant
BIM 111 Biomedical Instrumentation, *UC Davis BME Department*   July 2020-Dec 2020
- Helped in restructuring the course laboratory component to make remote teaching possible.
- Wrote lab instructions to guide students on MATLAB circuit simulations and signal processing.
- Lead online laboratory sessions and helped students troubleshoot simulation errors.
- Created a more interactive learning experience for students studying at home.

Undergraduate Research Assistant
Sato Lab, *UC Davis School of Medicine Pharmacology*   Nov 2018-Nov 2019
- Modelled cardiac action potentials with Hodgkin-Huxley Equations in MATLAB.
- Built and programmed electronic fireflies that synchronized with each other while blinking.
- Designed a walking stick that would assist in lifting based on user's walking rhythm and presented at BMES.

OUTREACH

Temporary English Instructor, Ba-Tang Elementary School of Yushu, China, July 2013
- Volunteered as an English instructor after the 2010 local earthquake.
- Gave lessons to students from grade 3 to grade 6 and managed PE classes.
- Understood more about the responsibility as a teacher and experienced the joy of helping people in need at the same time.

LEADERSHIP

President, Chinese Calligraphy at UC Davis, June 2017-Sept 2019
- Arranged annual Spring Festival Calligraphy Sale on UC Davis campus.
- Performed calligraphy and sold works created by club members to students and professors.

Travel Coordinator, UC Davis Table Tennis Club, Sept 2016-June 2019
- Organized travel for the Table Tennis school team before tournament events.

AWARDS

UC Davis College of Engineering Dean's Honor List, Spring 2016
Sacramento Table Tennis Fall Open U-2400 Doubles 1st place, 2016
Sacramento Table Tennis Fall Open T-3600 Team Event 3rd place, 2019