Aida Ruan

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EDUCATION

University of Michigan **Ann Arbor, MI**
B.S. in Electrical Engineering, Minor in Mathematics August 2021 – April 2025

- **GPA:** 4.0/4.0
- **Relevant Coursework:** Introduction to Electronic Circuits, Introduction to Signals and Systems, Electromagnetics I, Introduction to Data Structures and Algorithms, Honors Linear Algebra
- **Activities:** Women in Science and Engineering Residence Program (WISE RP), Campus Symphony Orchestra, Women in Electrical and Computer Engineering
- **Honors:** William J. Branstrom Prize (top 5% of freshmen class Fall 2021), WISE RP Summer Scholarship Recipient, Dean's List (x3)

EXPERIENCE

Michigan Mars Rover **Ann Arbor, MI**
Power & Astrobiology Sub-Team Member August 2022 – Present

- Design and organize electrical box, manage power distribution among different sub-team interfaces including arm motors, drive motors, and PCBs
- Created test plans for battery discharge, Powerpole connector strengths, and clamp-meter accuracy
- Tested spectral & reflectance sensors, Arduinos, and UV Sterilization LEDs for life detection for the science task in the University Rover Challenge

Optoelectronic Components and Materials Lab of Professor Stephen Forrest **Ann Arbor, MI**
Undergraduate Research Assistant April 2022 – August 2022

- Fabricated bulk heterojunction organic photovoltaic cells (OPVs) with >10% efficiency utilizing thin-film deposition techniques (spin-coating, thermal evaporation, thermal annealing, etching)
- Optimized device efficiency by experimenting with experimental factors such as temperature, active layer component number and energy level
- Analyzed degradation of ternary OPVs under ten suns through periodical measurement and calculation of device characteristics such as external quantum efficiency and IV curves

WISE RP/MRADS Living Community **Ann Arbor, MI**
General Physics II Study Group Leader January 2022 – April 2022

- Organized and directed PHYSICS 240 study group meetings for dorm Learning Community students through creation of worksheets
- Supported students by helping strengthen understanding of electricity and magnetism concepts

PROJECTS

Prediction Model for Efficient Disease Diagnosis **Ann Arbor, MI**
Practical Data Science for Engineers January 2022 – April 2022

- Implemented an ML model using Python to predict disease diagnosis from a list of symptoms, achieving >90% accuracy on feed-forward neural network, and random forest
- Collaborated and analyzed data w/ team of 4 to create a 25-page report to communicate findings and give a final recommendation

TECHNICAL SKILLS

Coding: C++, Python (NumPy, Matplotlib, Pandas), MATLAB, Git