

# AMY RUAN

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## EDUCATION

### University of Michigan

*B.S.E in Chemical Engineering, Minor in Computer Science*

GPA: 4.0/4.0

Joseph M. Geisinger Scholarship Recipient

Relevant courses: Intro. to Engineering, Organic Chemistry I, Intro. to Drug Development

Ann Arbor, MI

April 2024

### Fairport High School

Regents Diploma with Advanced Designation

Fairport, NY

June 2020

## RELEVANT EXPERIENCE

### University of Michigan Transportation Research Institute

*MDP Student Researcher, Adaptive Designs for Human Mobility Team*

Ann Arbor, MI

Jan 2020 – Present

- Develop more diverse range of computational human body models for more personalized safety and vehicle device design
- Process and landmark CT scans of adult skull, then use resulting data to morph baseline human parametric model to fit subject-specific geometries

*MDP Summer Research Fellow, Adaptive Designs for Human Mobility Team* May 2021 – Aug 2021

- Selected for fellowship to continue research during Summer 2021
- Segmented over 50 subject CT scans to extract bone geometry for adult skull and upper extremities
- Added 95 morphed humerus models to upper extremity dataset, expanding by approximately 25 times its original size
- Modified MatLab code for statistical analysis to be compatible with humerus models, using it to determine major variations in bone geometry

### Introduction to Engineering Team Project

*Food Science and Engineering*

Ann Arbor, MI

Fall 2020

- Partnered with General Mills to design and prototype new kind of chewy candy
- Produced final deliverables including process flow diagram and cost analysis of procedure
- Strengthened teamwork and collaboration skills in technical setting

## OTHER EXPERIENCE

### Wegmans Food Markets

*Pharmacy Technician*

Fairport, NY

July 2019 – Present

- Process prescription data, fill prescriptions, and release medication to customers following pharmacy protocol
- Troubleshoot issues and facilitate communication between patients and their insurance and/or prescriber

### Rochester Institute of Technology

*Machine Learning Research Intern*

Rochester, NY

July 2019 – Aug 2019

- Coded specialized neural network in Python to translate street scene images between the thermal and RGB domains for use in autonomous vehicle applications
- Communicated results in final deliverable to faculty and general public

### Fairport High School Senior Leadership Seminar Project

*Immigration Research Group Lead*

Fairport, NY

May 2019 – Oct 2019

- Led group of six students in research project studying U.S. immigration issues and policy
- Organized meetings and traveled to Washington, D.C. to speak with representatives from numerous executive agencies, interest groups, and congressional offices
- Compiled research and findings into final report and presentation

## ACTIVITIES

Books for a Benefit, Finance Chair, Fall 2020 – Present

- Promote literacy and education through volunteer programs in Southeast Michigan

AIChE, Member, Fall 2020 – Present

Michigan Mars Rover Team, Member, Fall 2020 – Winter 2021