

Ryan Hou

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EDUCATION

University of Michigan - Ann Arbor

Bachelor of Science in Engineering in Computer Science

Ann Arbor, MI

Aug. 2020 – May 2024

- Cumulative GPA: 3.941
- Relevant Coursework: Data Structures & Algorithms, Computational Linear Algebra, Intro Logic Design, Intro Statistics & Data Analysis

SKILLS

Programming Languages: C++, Python, Julia, MATLAB, Verilog

Tools & Libraries: Git, LaTeX, OpenCV, ROS

Software: VS Code, Unreal Engine 4, Unity, Premiere Pro, Microsoft Office

Languages: English, Chinese

PROJECTS

Baseball Tracker | *Python, OpenCV*

Apr 2021

- Detects and records baseball movement in a video by segmenting motion and color

Piazza Post Classifier | *C++*

Apr 2021

- Employed machine learning techniques to develop a program that automatically classifies subjects of Piazza posts

Office Hours Server Backend | *C++*

Mar 2021

- Built a small web server backend for an office hour queue

Tic Tac Toe with AI | *C++, SFML*

Dec 2020

- Tic Tac Toe game with GUI that allows users to play against computer AIs with multiple difficulties, including a hard difficulty utilizing the minimax algorithm

Content-Aware Image Resizer | *C++*

Feb 2021

- Resize images using seam carving algorithm to preserve meaningful content without cropping or scaling

3D Action RPG | *Unreal Engine 4*

Jun 2021 - Present

- A simple top-down action RPG game with combat and abilities.

2D Side Scroller Game | *Unity*

Jun 2021 - Present

- A simple 2D side scroller RPG game

HONORS & AWARDS

William J. Branstrom Freshman Prize | *University of Michigan - College of Engineering*

Fall 2020

- Awarded to freshmen who rank in the top 5% of the class

Deans' Honors List | *University of Michigan - College of Engineering*

Fall 2020 – Winter 2021

- Awarded to engineering students with high scholastic standing

University Honors | *University of Michigan*

Fall 2020 – Winter 2021

EXTRACURRICULAR ACTIVITIES

UM Autonomous Robotic Vehicle Team | *Developer for Computer Vision Sub-Team*

Sept 2021 - Present

- Use computer vision techniques to develop autonomous robotic vehicle software for the IGVC competition

Assistant Baseball Coach | *International School of Beijing*

Mar 2021 - Jul 2021

- Instructed high school baseball players at the varsity level

Varsity Baseball Team Captain | *International School of Beijing*

Aug 2016 - Oct 2019

- Lead the varsity team and organized practices, workouts, and team events

Cinematographer for Filmism Studios | *Beijing, China*

Aug 2018 - May 2020

- Filmed and edited various promotional videos for school events and sport tournaments