

Albert Chen

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EDUCATION

University of Michigan College of Engineering

Prospective Bachelor of Science in Engineering in Computer Engineering

Ann Arbor, MI

Aug. 2024 – May 2027

EXPERIENCE

Undergraduate Research Assistant

University of Michigan

Sep. 2024 – Present

Ann Arbor, MI

- Developed an algorithm with RLHF, **LiDAR**, RGB-D, and **vSLAM** in order to estimate human engagement
- Implemented a **ROS**-based simulation in NVIDIA Isaac Sim to verify the engagement algorithm

P-CEP STEM Academy, Group Leader

Plymouth High School

Sep. 2020 – May 2024

Canton, MI

- Developed a variety of projects using Raspberry Pis, Arduinos, **Tensorflow** + **Keras**, CAD Design, 3D Printing, and CNC Machines, including autonomous race cars and assembly lines
- Created a prototype robot with **Python**, C++, **OpenCV**, and ROS to automatically plow snow
- Applied machine learning frameworks to build a breast cancer classifier and GAN network simulations

P-CEP CyberPatriot Team, Captain

Plymouth High School

Sep. 2021 – May 2024

Canton, MI

- Remedied vulnerabilities in a variety of technical aspects, including **Linux**, SQL, and **Git**
- Led the team to semifinals in the Platinum Tier of the cybersecurity competition

Math Competitor

Plymouth High School

Sep. 2020 – May 2024

Canton, MI

- Qualified for AIME in multiple years, scoring in the top 2.5% of all AMC 10/12 test takers
- Oversaw 30 students in the East Middle School math team through group challenges and test reviews, explaining difficult concepts through lecture-style lessons

Lifeguard

Canton Township

Jun. 2023 – Aug. 2024

Canton, MI

- Jeff Ellis and Associates certified in CPR and First Aid
- Trained new employees by teaching and practicing job routines with them

PROJECTS

Hand Gesture Car Racing | *Mediapipe, Express, PixiJS, Git*

Hack Dearborn 3 (Hackathon)

Oct. 2024

Dearborn, MI

- Launched a 2D racing simulator with **PixiJS** to create smooth and fluid gameplay
- Utilized Google's Mediapipe models to grant users the ability to drive without external controllers

TECHNICAL SKILLS

Languages: C/C++, Python, Java, SQL, JavaScript, HTML/CSS, Bash

Tools: ROS, AprilTags, Arduino, Raspberry Pi, CNC machines, 3D printing

Developer Tools: Git, Linux, VS Code, MATLAB

Libraries: Tensorflow, Keras, PyTorch, pandas, NumPy, Matplotlib

PUBLICATIONS

Wonse Jo, Albert Chen, Helena Sieh, "Development of Human Engagement Estimation Algorithm from Human Visual Perspective-taking," *In Progress*

PERSONAL INTERESTS

Computer-customizing, Swimming, Music