Albert Chen

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EDUCATION

University of Michigan College of Engineering Ann Arbor, MI
Prospective Bachelor of Science in Engineering in Computer Engineering *Aug. 2024 – May 2028*

EXPERIENCE

Undergraduate Research Assistant Sep. 2024 – Present
University of Michigan *Ann Arbor, MI*
- Developed an algorithm with RLHF, LiDAR, RGBD, 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 Sep. 2020 – May 2024
Plymouth High School *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 Sep. 2021 – May 2024
Plymouth High School *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 competition

Math Competitor Sep. 2020 – May 2024
Plymouth High School *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 Jun. 2023 – Aug. 2024
Canton Township *Canton, MI*
- Guaranteed guest safety in the aquatic center and administered first aid when needed
- Worked with co-workers to diffuse high stress situations to provide best care to guests
- Jeff Ellis and Associates certified in CPR and First Aid

PROJECTS

Hand Gesture Car Racing | *Mediapipe, Express, PixiJS, Git* Oct. 2024
Hack Dearborn 3 (Hackathon) *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