

Albert Chen

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EDUCATION

University of Michigan College of Engineering

Ann Arbor, MI

B.S.E. in Electrical Engineering - GPA: 4.00

Expected Graduation: May 2027

- Relevant Coursework: Logic Design, Discrete Math, Differential Equations, Next Generation Computing

EXPERIENCE

Founder, Lead Developer

Feb 2024 - Present

Outfit of the Day

Ann Arbor, MI

- Built and launched a winning hackathon app for Android and iOS, gaining 200+ users on our Beta waitlist
- Managed our codebase and Git repository, delegating tasks to our team to ensure our workflow is productive
- Documented our progress and ideas through Notion and meetings, ensuring that we will meet our deadlines

Undergraduate Researcher

Sep. 2024 – Present

MAVRIC Lab @ University of Michigan

Ann Arbor, MI

- Created and implemented ROS packages in C++ with LiDAR and RGB-D data to estimate human viewpoint
- Tested the packages in simulation and translated them to the real world, empowering future research in our lab
- Contributed to weekly lab meetings by presenting progress reports and soliciting feedback from peers and advisors

P-CEP STEM Academy, Group Leader

Sep. 2020 – May 2024

Plymouth High School

Canton, MI

- Researched, designed, and built an Arduino-based robot with OpenCV and ROS to automatically plow snow
- Designed an assembly line with CNC Machines and 3D Printers to automate various manufacturing processes
- Applied machine learning frameworks to build data classifiers and GAN network simulations

P-CEP CyberPatriot Team, Captain

Sep. 2021 – May 2024

Plymouth High School

Canton, MI

- Remedied critical vulnerabilities in Linux machines, including weak permissions and misconfigured services.
- Led the team to the semifinals at the Platinum Tier, achieving a rank higher than 30% out of 5,183 teams
- Developed a Bash script to automate repetitive tasks, including software updates and user hardening

Lifeguard

Jun. 2023 – Aug. 2024

Canton Township

Canton, MI

- Certified in CPR and First Aid with Jeff Ellis and Associates
- Trained new employees by teaching and practicing job routines with them
- Collaborated with co-workers and communicated with concise instructions to diffuse high stress situations

PROJECTS

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

Oct. 2024

Hack Dearborn 3 (Hackathon)

Dearborn, MI

- Launched a 2D racing simulator webapp with PixiJS and Express.js to create smooth and fluid gameplay
- Utilized Google's Mediapipe models to grant users the ability to drive with only their hands and a camera

Automatic Snow Plow | *ROS, Computer Vision, Arduino*

May 2024

P-CEP STEM Academy (School)

Canton, MI

- Developed an automatic snowplow model capable of navigating a specified area through an external camera
- Achieved ROS communication between the Arduino and Raspberry Pi, allowing the robot to path-plan effectively

TECHNICAL SKILLS

Languages: C/C++, Python, Bash, SQL, JavaScript, HTML/CSS, Verilog, ASM, Java
Tools: ROS, FPGAs, AprilTags, Arduino, Raspberry Pi, CNC machines, 3D printing
Developer Tools: Linux, Git, Modelsim, Quartus, VS Code, MATLAB
Libraries: OpenCV, Tensorflow, Keras, PyTorch, pandas, NumPy, Matplotlib