Justin Wong

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EDUCATION

University of Michigan (Ann Arbor, MI) - College of Engineering **August 2021 - May 2025**

Bachelor of Science, Engineering in Computer Science GPA 3.94/4.00

- Engineering Global Leadership Honors Program
- William J. Branstrom Award
- Relevant Coursework**:** Autonomous Drones, Data Structures and Algorithms, Machine Learning

EXPERIENCE

Ritz Deli Mobile Gaming Company **February 2020 - Present**

Data Science Intern **Oakland, CA**

- **Economy Model:** Generated graphical forecasts of player progression trends with SQL to optimize in-game economy parameters boosting engagement within mobile game boasting 500k downloads.
- **Game Tuning:** Delivered strategic recommendations for level adjustments using statistical output Google Sheets by leveraging Pandas to extract data from BigQuery, increased player retention by 25%.
- **Bingo Card Star System:** Wrote Python code within Google Colab employing combinatorics to solve a key challenge in product creation of various levels, improving overall efficiency by 100%.
- **AI Advertisements:** Produced 2-min videos with MidJourney and HeyGen API saving $2,000+ in production costs.

Multidisciplinary Design Program with I-PAVE Company **January 2023 - Present**

Student Software Engineer **Ann Arbor, MI**

- **Control System:** Utilized OpenCV to decode physical AprilTags markers shown by users in real-time, enabling seamless control of a telepresence robot during video conferencing sessions.
- **Product Management:** Derived end-user requirements through literature reviews, patent searches, and stakeholder analyses, culminating in 30-page executive summary and design review presentations to steer development process.

University of Michigan Robotic Submarine Team **August 2021 - Present**

Perception Team Member **Ann Arbor, MI**

- **Upgraded Training Platform:** Devised customized bash scripts to migrate Tiny YOLOv4 model platform from Google Colab to Great Lakes Slurm Cluster, resulting in 1000% increase in both storage capacity and training speed.
- **Color Correction:** Leveraged white-world assumption to optimize underwater performance of submarine's computer vision algorithm utilizing OpenCV, resulting in a 10% reduction in objective detection time.

PROJECTS

FunctionFinder | *Swift, Firebase, GoogleMaps/GooglePlaces API*

Full Stack App Developer for social media app tailored to parties by aiding users in discovering and inviting others to events. Integrated Google Maps and Google Places APIs into frontend's map-based homepage, showcasing real-time party locations. Employed Firebase for user authentication and backend data management, ensuring secure storage of user details and posts.

Hawkseye Website | *WordPress CMS, HTML/CSS, JavaScript, PHP*

Web Developer for school newspaper resulting in 4x traffic. Designed WordPress theme for website's frontend integrating innovative design elements inspired by the Atlantic for refined and polished user interface. Introduced advanced features and functionality into backend infrastructure such as real-time sports scores, role hierarchy, and social media embedding.

TECHNICAL SKILLS

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

Libraries/Frameworks: OpenCV, Pandas, NumPy, Matplotlib, React, jQuery, Express

DeveloperTools: Git, Google Colab, Google Cloud Platform, VS Code, XCode, Android Studio, WordPress, Linux, CAD