

# Joshua Hsueh

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## Education

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**University of Michigan, Ann Arbor (4.0 GPA)**

**B.S. Computer Science** (College of Engineering), Statistics Minor

**Junior**

*Expected Graduation: May, 2025*

Thomas Jefferson High School for Science & Technology: (4.0 GPA)

Top 3 National High School

## Skills & Awards

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- **Programming Languages:** C/C++, Python, JavaScript, HTML, CSS, Java, TypeScript, SQL, Go, Julia
- **Tools & Frameworks:** NodeJS, ReactJS, NextJS, VueJS, Android, MongoDB, PostgreSQL, Firebase, Supabase (Firebase alternative), GraphQL, REST APIs, Linux, Git Version Control, AWS, Google Cloud, Redis, Docker
- **Machine Learning:** Numpy, Keras, Pandas, PyTorch, OpenCV, Neural Networks, K-means, GPT, NLP
- **Awards:** 4<sup>th</sup> Uni. Rover Challenge 2023, 6<sup>th</sup>/6,000 CyberPatriot Finals 2022, 2<sup>nd</sup> Congressional App Challenge 2021

## Work Experience

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**World Wide Technology:** innovative tech solutions provider and integrator

*May 2023–August 2023*

*Software Engineering Intern*

- Established CI/CD pipeline software to automate/track software building process and notify stakeholders about release notes, maintenance windows, and impacted areas for 50+ deployments and 6,000+ customers
- Refactored NodeJS API to utilize RabbitMQ message bus and GraphQL queries for 50% more efficient master data transactions into backend systems, such as Oracle SOA and PartnerHub, serving over 90 Fortune 100 companies
- Technologies: NodeJS, MongoDB, PostgreSQL, GraphQL, Cloud Foundry, Kafka, Jenkins, Git, Agile, Oracle Cloud

**Yext:** cloud-based tech company in digital marketing

*June 2021–August 2021*

*Software Engineering Intern*

- Deployed dynamic location sites with SEO, Google Analytics, and 20% improved page speed performance via caching for corporate clients with over 70 million users such as [Wells Fargo](#), [Dunkin'](#), and [The UPS Store](#)
- Developed platform to generate QR codes for stores into Knowledge Graph, saving 40 hours per client per use
- Technologies: NextJS, Soy Static Templating, AWS Lambdas, Redis, Jenkins, Go, Git, Agile

**HKP Solutions:** start-up tech company in hospitality management

*May 2020–August 2020*

*Software Engineering Intern*

- Launched mobile and web application to manage, track, and reward housekeeping services for the hotel industry
- Led software development team through 12 SCRUM sprints with design, coding, reviews, tests, and issue resolutions
- Technologies: ReactJS, Android Studio, REST APIs, PostgreSQL, Firebase, JWT Tokens, Git

## Select Projects

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**Michigan Mars Rover**

*2022–Present*

- Developed teleoperation processes for robot [Rosie](#) placing 4<sup>th</sup>/104 in University Rover Challenge 2023
- Assembled debugging interface with ROS and Vue.JS to display ongoing, concurrent robot inputs and actions
- Revamped Python program with MoveIt kinematics and motion planning for smooth joint movement

**Rainman** (Blackjack Artificial Intelligence)

*2021–2022*

- Automated optimal blackjack betting decisions with AI, genetic algorithms, and YOLOv4 computer vision architecture in Python for real-time card object detection with 97% accuracy and 57% profit percentage
- Generated 50,000+ images with C++ and OpenCV image augmentation; stored into Supabase for training

**EscapeVape** (Addiction Recovery App)

*2020–2022*

- Implemented 12 modern therapies and leveraged Natural Language Processing (NLP) machine learning to track, analyze, and promote recovery for 2,000+ users; Received 2<sup>nd</sup> place Congressional App Challenge
- Technologies: NodeJS, MongoDB, PyTorch, Google BERT, NLP, Google Cloud, Data Structures & Algorithms