Hali Huang

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ACADEMICS

Massachusetts Institute of Technology, Cambridge, Massachusetts   *May 2025*
- Candidate for Bachelor of Science in Computer Science

RESEARCH

Predicting Epoch Time | MIT Kavli Institute for Astrophysics and Space Research   **Summer 2022**
- Preprocessed TESS and ZTF light curves for training
- Developed and trained GRU and TCN machine learning models to detect time of maximum light and explosion of transient objects in space

Indoor IOT Mapping | MIT Signal Kinetics Lab   **January 2022**
- Utilized RTABMap and OpenCV to create a 2D map of the environment and localize
- Applied computer vision and RFID sensors to accurately detect and map the position of tagged items

TECHNICAL EXPERIENCE

Steel Hawks | Townsend Harris HS Robotics Team   September *2017 – June 2021*
- **Steel Hawks Lead Programmer (2020 - 2021):** Led the programming subteams and integrated Tensorflow ML algorithms with our traditional OpenCV computer vision system
- **Computer Vision Subteam Lead** (**2019 - 2020**): Headed development of computer vision utilizing OpenCV library; coded robot commands using vision data to perform actions like move, align, or shoot at detected objects
- **Website & Scouting Application Developer** (**2018 – 2019**): Developed the team website ([Link](#)) and assisted in creating a Cordova multiplatform mobile application for scouting other robots at competition

Web Developer | Single Vision Shared Story   January - June *2021*
- Created a website ([Link](#)) using VueJS for a nonprofit organization seeking to organize theatrical performances around user submitted stories about social identity
- Set up a backend and database to manage user submitted stories using Cloud Firestore
- Developed a separate web app for admins to analyze gathered information and change specific page content

LatinWiki Developer and Creator   June *2018 - July 2020*
- Built a web app that utilizes the MediaWiki API to translate English to Latin and back while providing detailed information about the word's latin form such as part of speech, conjugation, declension, gender and more ([Link](#))

Bay Area Hacks Hackathon - Main Prize 2nd Place   **July** *2020*
- Gathered new articles using web scraping algorithms and trained a model to categorize the news from major news outlets by sentiment
- Designed a website to showcase the project and worked with Tornado websockets to connect to the backend

Software Developer |Townsend Harris High School   October *2020 - May 2021*
- Developed a remote attendance system during COVID-19 and a inventory management system for school administrators and teachers using Firebase and Google App Scripts together with a school alumnus

TECHNICAL SKILLS

- Coding in Python, Java, C++, HTML, CSS, Javascript
- Well-versed with JS Frameworks like React, VueJS
- Experienced in website development and design
- Developing cross-platform mobile apps with Cordova
- Creating Electron desktop applications
- Maintaining databases using Firebase
- Machine Learning with Keras
- Computer Vision with OpenCV