Nicholas Huang

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EDUCATION

University of Michigan, College of Engineering ***May 2021***

Bachelor of Science, Engineering - Computer Science | Minor – Ross School of Business

- Cumulative GPA: 3.78/4.00 | ACT: 36 | SAT: 1590
- Coursework: Data Structures and Algorithms, Introduction to Computer Organization, Machine Learning
- Honors: National Merit Finalist Scholarship Winner, ABC News Best and Brightest Award, National AP Scholar
- Activities: EECS Instructional Aide, Alpha Kappa Psi Business Fraternity, Nexecon Consulting Group

SKILLS

- Proficient: C++, Java, Python, MATLAB and Simulink, Swift
- Experience: HTML, CSS, JavaScript, React, Node.js

WORK EXPERIENCE

Ford Motor Company (Connected Vehicle Platforms) *Software Developer Intern* ***Summer 2019***

- Built and distributed a full-stack iOS app which implements OAuth2 security and is able to start, stop, lock, and unlock authorized Ford vehicles remotely, allowing developers to efficiently discover bugs in QA and Prod
- Created an Android app which incorporates Google Auth2 libraries to protect client information and utilizes the HTTPUrlConnection class to fetch JSON data, ensuring security by storing all data locally with SharedPreferences
- Documented the process of accessing an Azure B2C database, fetching protected data, and calling a redirect URI to a local app, providing Ford partners, such as Amazon Trunk Delivery, with a template on using Ford APIs

ROAHM Lab *Machine Learning Research Assistant* ***2019 - Present***

- Trained a convolutional neural network (CNN) to classify different types of terrain, using over 2000 images gathered from a python web-scraper, reaching a 72% "icy road" correct classification rate on a 500-image test set
- Created a generative adversarial network (GAN) by pretraining a discriminator against MNIST before training on the "icy road" CNN classifer, generating images resembling "icy roads" therefore verifying CNN effectiveness

Nexecon Consulting Group *Technology Consultant* ***2019 – Present***

- Built a software tool for Fortune 100 airline to calculate optimal gate-flight configurations by analyzing two years of previous flight data, allowing gate managers to assess risk percentages for every flight and mitigate delays
- Partnered with analysts at a top US furniture retailer to optimize their warehouse distribution by writing a script to calculate the profit margins of the current and promising distribution flows, resulting in lower shipping cost

BLUElab India Project *Cultural Communications Team Lead* ***2018 - Present***

- Presented to local high school students about BLUELab's mission of socially engaged design, inspiring students to get involved with similar design teams that emphasize sustainability and collaboration within their products
- Synthesized action plans for needs-assessment trips to partner communities in India, ensuring that materials are reliably sourced, that communication across cultural boundaries is smooth, and that travelers are prepared

PROJECTS

QUEENS Non-Profit iOS Application (Swift) ***2019 - Present***

- Managed a team of four computer science students in the full-stack development of an iOS application for QUEENS, a non-profit empowerment organization, leading instructional sessions in iOS development
- Building social networking functionality that incorporates a live feed, post creation, user profiles by utilizing the Alamofire and SwiftyJSON pods for network abstraction and the LoadableViews class for a clean front-end UI

Personal Assistant App (Swift) ***2019***

- Employed the SwiftyPListManager pod, PersistData class to store information across app lifetimes and the AVPlayer class to play online podcasts by parsing information from HTTPUrlRequests

Alpha Kappa Psi Brotherhood Database (React / Python Flask / MongoDB) ***2019***

- Constructed an API and stylized a database webpage that served as an anonymous survey system with access level management to ensure secure information gathering with an OAuth layer for member access

Networked Board Game (Java) ***2018***

- Employed a TCP/IP connection to play a two-player game of chess across two server-connected devices utilizing the socket class to send and read data from a local server, with GUI image rendering for visual gameplay

ADDITIONAL

- Owner of provisional patents for an intelligent alert system and a privacy-centered email interface
- Co-founded a summer camp to introduce students to programming, kick-starting three FIRST Robotics teams
- Incoming Forward Deployed Software Engineer Intern at Palantir Technologies for Summer 2020