

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, Web Systems, Machine Learning, Conversational AI Design
- 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

- Languages: Python, Javascript, C++, Java, MATLAB, Swift, HTML, CSS
- Libraries and Frameworks: PyTorch, Keras, Tensorflow, Spark, React, Node.js

EXPERIENCE

Palantir Technologies *Forward Deployed Software Engineer Intern*

Summer 2020

- Constructed a module powered by typescript functions and backed by Spark SQL dataframes, and spear-headed the iterative user-adoption process, leading to a streamlined customer workflow and significant cost reductions
- Initiated the periodic synchronization of time series data and wrote subsequent Spark SQL transforms that converted the data into a human-readable format, before displaying it in a user-responsive process flow diagram
- Implemented a new product management interface that was adopted team-wide, presented product updates to clients on a weekly basis, and led user-engagement sessions showcasing our tool functionalities to new customers

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 validation test set
- Created a generative adversarial network (PG-GAN) by pretraining a discriminator against MNIST before training on the "icy road" CNN classifier, generating images resembling "icy roads" therefore verifying CNN effectiveness
- Trained a PG-GAN on the CamVid dataset to generate custom image segmentation masks, which are then used as inputs to the GauGAN to create dash-cam like images for the testing of autonomous vehicle decision making

Ford Motor Company (Connected Vehicle Platforms) *Software Engineer 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 for the efficient validation of parallel vehicle use cases
- 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

Nexecon Consulting Group *Project Manager and Technology Analyst*

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

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

AIM Fitness App (Swift)

2020 - Present

- Utilized a workout generation algorithm to convert user input from a five-minute lifestyle quiz into a thirty-day workout and diet goal plan, employing the CoreData class to store information locally across app lifetimes

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
- Loyal Manchester City fan since 2012, avid ping-pong player, met and spoke with Novak Djokovic