

Richard Guan

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GitHub: github.com/rguan72

EDUCATION

University of Michigan, Ann Arbor, MI

May 2021

B.S.E. in Computer Science, Minor in Mathematics

GPA: 3.90/4.00

Classes: Algorithms, Data Structures, Computer Organization, Combinatorics, Calc III, Statistics, Linear Algebra, Physics

SKILLS

Programming Languages: Python, C++, JavaScript, Java, HTML, CSS, SQL

Other Technologies: Flask, React, React Native, Django, Firebase, Git, NodeJS, Express, Android, Unix

EXPERIENCE

Larky

Ann Arbor, Michigan

SDE intern

May 2019 – Present

- Implemented several features in Nudge, a push notifications library, including functionality for push notifications scheduled by a client through a ReactJS based dashboard to be editable after creation
- Found and fixed major production bugs in Nudge, including inconsistent front-end validation in dashboard's ReactJS form, incorrect status codes being sent from dashboard's Flask proxy, and notifications sent by node-apn from the NodeJS server being sent to all iOS apps under an organization instead of to a single app to enable an update to be released 20% earlier
- Led full stack (NodeJS, ReactJS, Android) development of suppressed notifications feature, an urgent client request

Crowds and Machines Lab

Ann Arbor, Michigan

Undergraduate Researcher

May 2019 – Present

- Collaborated with two undergraduate researchers on a keystroking web-based text editor built with NodeJS and Express in order to observe how students approach changing code written by peers
- Designed and helped run a study to assess what affects readability of student written code

UrbanBee

Cascais, Portugal

CTO

July 2019 – Present

- Co-founded a company that creates sensor-integrated beehives for urban beekeeping hobbyists; awarded as a top 10 team at the European Innovation Academy and raised over \$1000 on Kickstarter
- Designed a React Native mobile app to monitor real-time temperature data logged in Firebase by an Arduino in a beehive

University of Michigan Solar Car Team

Ann Arbor, Michigan

Software Developer

Sept 2018 – May 2019

- Developed a web race simulator using Django, Python, and JavaScript to prepare strategists for the World Solar Challenge
- Created an interactive Electron-based telemetry desktop app to streamline decision-making process of team strategists

180 Degrees Consulting

Ann Arbor, Michigan

Business Analyst

Jan 2019 – Present

- Conducted UI/UX research for non-profit microfinancing client to improve user retention on online platform by 3%
- Wireframed and presented two designs in Adobe XD for microfinancing client's online platform

PROJECTS

StoreBack API (Personal)

July 2019 – August 2019

- Constructed an open source REST API to serve as backend for developers to build custom online retail stores with a CRUD interface to items, merchants, carts and more without any knowledge of databases
- Written in Python and made with Flask and SQLAlchemy; Postman used as API spec

SnapCal Web App (Personal)

Sept 2018 – Jan 2019

- Designed and built a web app using Python/Django and JavaScript with jQuery and Google Cloud Vision API to interpret text from fliers and streamline the user experience of adding events to calendars
- Deployed an alpha version of SnapCal on Heroku with 80% text recognition accuracy and over 50 users in two countries

Laser Tag Android App (Personal)

Oct 2018

- Developed an Android app with Kotlin and Firebase in 36 hours during MHacks to play laser tag with a phone
- Applied open source library OpenCV to enable a computer vision based mobile application that functioned as a transmitter for physical laser tag

Piazza Sentiment Analysis: Online Post Classifier (Class)

April 2019

- Made a Naïve Bayes Classifier to predict subject of student posts on an online class forum
- Written in C++ and tested/optimized with valgrind, address sanitizer, and perf

AutoRegister (Personal)

November 2018

- Engineered a Selenium bot in Python that registers for classes through Wolverine Access the moment registration opens

ADDITIONAL

- Organized a pitch competition that provided access to mentors, resources, and prize money for 30 high school students