Nathan Li

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Experience

Software Developer – enLIGHT *Present*
- Developed a web platform to connect student startups and entrepreneurs with industry professionals
- Implemented database schema and **AWS S3** storage to handle user information using **Django**, **Flask**, and **SQLalchemy**
- Created front end user profile and edit profile capabilities using **jinja2** templates to dynamically render HTML pages

Hardware Developer – AOMS Technologies *Fall 2018*
- Created a fiber optic interrogator simulator to plot data from different sensor channels using **Python** and **tkinter**
  - Programmed a peak detection algorithm used to analyze the number of working fiber optic sensors
- Developed a script visualizing data collected from a LoRa range test to aid with signal strength analysis using **Python**

Electrical Engineer – AXYZ International *Winter 2018*
- Created custom parts improving the functionality of a photoelectric sensor for a material off-loader using **SolidWorks**
- Designed, manufactured and wired a jig to test the conformance of 5 and 10 horsepower motor spindles

Junior Process Engineer – Morgan Solar *Summer 2017*
- Programmed a 3-axis CNC silicon dispenser gantry to parse and send G-Code commands using a **Python** script
- Automated quality analysis measurements of R&D solar panel projects from a coordinate measuring machine using **VBA**

Projects

Every Song in Its Right Place *Fall 2018*
- Built a web app to graph the most popular tracks and other interesting statistics per album for any artist on Spotify
- Collected and sorted metadata for each album and track by utilizing **Spotify's Web API**
- Created a minimalist and interactive front-end using **React**

Workout App *Fall 2018*
- Developed an **Android** app to display a daily workout plan
- Generated multiple programs based on user's desired weightlifting goal and workout type
- Stored and updated exercise and weight information per workout program in **Firebase Cloud Firestore**

Skills

Languages
Python
JavaScript, HTML & CSS
Java
C++
C

Frameworks
React
Django
Flask
Android

Databases
SQL
Firebase
MongoDB

Tools & Technologies
Node.js
AWS

Other Projects
Tabb
FIFA Penalty Shootout
Automated Parcel Sorter
WordPress Web Development

Education

University of Waterloo
3A Mechatronics Engineering
Expected graduation: April 2021

Relevant Courses
MTE 241 - Introduction to Computer Structures and Real Time Systems
MTE 140 - Data Structures and Algorithms