Victor M. Lopez Rodriguez

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Core Technical Skills

Front End: Typescript, React.js, three.js, Angular, Ionic Framework, HTML5, CSS
Back end: Python, Node.js, SQLite
Other: C, C++, Shell script, Batch script, LabVIEW

Software Development Experience

Datagration - Software Developer
Houston, Texas **August 2020 - Present**

- Architected the web application using existing RESTful API and set standards for the project. Updated endpoints as necessary to add new features to existing functionality. (C#, React, Typescript)
- Worked in tandem with engineers and backend team to successfully deliver visualization for production forecasting. (React, Typescript)
- Built a custom drag and drop builder to create flows to automate activities. (React, Typescript)
- Created text editor using Monaco Editor and implemented key features such as auto-complete, signature and hover documentations for custom scripting language. (Typescript)
- Developed a custom spread-sheet component using React-Window that can handle up to 500k x 500k rows and columns. (React, Typescript)

Engineering Experience

Summit ESP, A Halliburton Company — Controls Engineering Co-op
Tulsa, Oklahoma **August 2018 - May 2019**

- Developed a kivy python front-end application for test, validation and logging of up to 32 pressure transducers, reducing test completion time by 90% down to 1 hour. (Python, SQLite)
- Constructed batch script to configure routers to establish ethernet connection in multi-drive well-sites. (Batch, Teraterm)
- Redesigned the existing LabVIEW Product test to replace serial communications with ModbusTCP to allow testing the new company instrument for data logging to SQLite databases. (LabView, SQLite)

Lyondellbasell, Houston Refinery — Electrical Engineering Co-op
Houston, Texas **May 2019-August 2019**

- Developed an excel dashboard depicting the electrical sub-system to be used for capital and long term planning.
- Discovered the susceptibility of two critical 12KV motors to insulation failure by identifying increasing negative polarity trend in Partial Discharge monitoring data.

Projects

WS2812 Modular Display:
https://github.com/vmlopezr/modular-ws2812-display-esp32 **August 2019 - May 2020**

- Developed phone application that supplies real-time data to ESP32 microcontroller via websockets. (React Native)
- Established firmware to configure an ESP32 access point as well as led display driver state machine. (C++, ESP32)

RaspberryPi Dashcam:
https://github.com/vmlopezr/rpi-dashcam **August 2019 - Present**

- Constructed Shell script to configure a wireless Access Point and install the Real Time Clock. (Shell Script)
- Developed website application served from a raspberry pi which records videos and provides livestream via a Node.js server. (TypeScript, Ionic Framework, Node.js)
- Created a docker image for easy installation on raspberry pi 3b/4b. (Docker)

Education

- **University of Houston** **May 2020**
  Dual Degree, B.S. Electrical Engineering, and B.S. Mathematics *Houston, TX*