Sebastian Alvarez

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EDUCATION

Bachelor of Science, Electrical Engineering, University of Kansas **5/2019**
Minor in Business, University Honors Program, Eta Kappa Nu (IEEE Honors Society)

CERTIFICATIONS

Google IT Support Professional Certificate **12/2020**
Google IT Automation with Python Specialization Certificate **11/2020**

SKILLS & TECHNOLOGIES

Languages: Spanish, English
Programming Languages: Python
Operating Systems: Windows 10, Linux
Software: Rockwell Studio 5000, Wonderware, MATLAB, Microsoft Office, Git, AWS, Altium Designer
Networking: TCP/IP, Ethernet, DNS, UDP, SSL, DHCP

WORK HISTORY

Controls Engineer, Process Solutions, Stanwood, WA **9/2019 - 11/2020**

- Designed programmable logic controller (PLC) code to automate production and packaging lines in Frito Lay plants, increasing product flow from 2000 to 3500 lb/hr
- Designed user-intuitive human-machine interface (HMI) screens in collaboration with plant operator's feedback to improve system monitoring and equipment reset time response
- Collaborated with cross-functional teams on-site to troubleshoot hardware and software issues, allowing customer to run operations continuously for up to 20hrs/day
- Configured network switches to maintain solid communication between main controller and conveyor drives, servos and HMI screens
- Created a "Motor Routine Generation" program in C# to generate a VFD operation script, optimizing the design phase time for projects with extensive distribution lines

Co-Founder/Electrical Engineer, Terrafarm, Lawrence, Kansas **9/2019 - 12/2020**

- Co-founded Terrafarm, a start-up that aims to build vertical farming modules
- Rapid prototyped and designed the power distribution and lightning subsystems of vertical farming module, documenting component selection for future manufacturing scalability
- Integrated pumps, valves, microcontrollers and sensors to automate module watering and lighting processes, improving customer experience and optimizing plant growth all year round

Undergraduate Research Assistant, CReSIS, Lawrence, Kansas **8/2017 - 5/2019**

- Led a team of 4 people in the design and building of 10 power efficient RF filters for the Dome Fuji radar to collect accurate measurements on Antarctic ice sheets
- Rapid prototyped and designed tests for circuit boards using lab equipment to ensure functioning

PROJECTS

Automation of Online Fruit Store Catalog

- Created a Python script to process product's images and fetch text into dictionary data structure to upload content via JSON
- Implemented a "health check" script to monitor CPU usage, disk space and available memory sending an email alert when issues arise

Ticketing System Monitor Report:

- Created a script that analyzes syslog events to generate a ranking of error messages and usage statistics based on user name, number of messages logged and ticket number