New York, NY
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RENATO VILCA VALDERRAMA

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EDUCATION

The City College of New York — New York, NY
Bachelor of Engineering, Electrical Engineering — Graduated Jun 2021

SKILLS

- Software: Riverbed Modeler, Packet Tracer, EAGLE, LTspice, Python, MATLAB/Simulink, C++, Verilog
- Hardware: Embedded Microcontrollers, Soldering, Electrical/Lab Instruments, 3D Printers
- Languages: Fluent in Spanish

PROJECTS

- **Microfluidic Bioprinter** As our capstone project, a group of classmates and I created a bioprinter capable of printing microfluidic structures out of hydrogel. We modified a 3D-printer to use a 3D-printed pump and an adjustable laser to extrude and cure material into the desired shape with modified G-Code. (Spring, 2021)
- **Arduino Controlled Fan** Created an Arduino controlled fan whose speed can be either controlled by a potentiometer or by the current temperature. A remote control is used to switch between the two modes. A LCD screen shows the temperature being read and current mode. (Fall, 2020)
- **CX – 6 Rocket** As part of the Harlem Launch Alliance, a student-run rocketry organization, I am continuously cooperatively designing the CX – 6 rocket's electrical recovery system. I also oversee the electrical section's competition compliance and am helping develop solutions to the design constraints. (Spring, 2020)
- **6-Node Network Design** To compare routing algorithms, I used the Riverbed Modeler software to simulate a 6-node network and compare average delay, utilization, and speed of convergence. My results favored the Routing Information Protocol. (Spring, 2020)

EXPERIENCE

Queens College Makerspace — New York, NY
Makerspace Technician — Jun 2021 – Aug 2021
- Programmed and designed a 3D-printed enclosing for a smart doorbell that alerts Makerspace Slack channel
- Collaborated with intern team in organizing equipment and electronics in preparation for upcoming semester

Maximus — New York, NY
Bilingual Consumer Services Specialist — Jun 2020 – Aug 2020
- Assisted consumers in processing government-sponsored health insurance plan applications in Spanish
- Navigated databases to fulfill updates and requests regarding consumer health insurance marketplace accounts

Frette — New York, NY
Sales Support — Dec 2015 – Jan 2017
- Worked cooperatively with stockroom staff in preparing the store for inventory check with multiple pre-counts
- Boxed and shipped items to fulfill orders or requests from other Frette locations
- Aided the sales team with product organization and with technical support across several devices

DESIGN CHALLENGES / HACKATHONS

- **MakeMIT Hackathon** Collaborated with a team of three to design an automated seeding and ice-melt rover. Prototype was awarded prizes in the "Sustainability" and "Best Home Robot" categories. (Spring, 2021)
- **AECOM & CCNY MTM COVID-19 Design Challenge** Worked with a team of five to design an N95 mask attachment that reduces contamination. Currently using awarded competition funding for further prototyping and to submit a provisional patent. (Summer, 2020)