

New York, NY
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RENATO VILCA VALDERRAMA

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EDUCATION

The City College of New York
Bachelor of Engineering, Electrical Engineering

New York, NY
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 are creating a bioprinter capable of printing microfluidic structures out of hydrogel. We are currently modifying a 3D-printer to use a piezo-electric pump, solenoid valve, 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 currently 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)