

Caroline D. Eco

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SUMMARY

Electrical engineer and a robotics researcher. Strong problem solving, leadership, communication and documentation skills. Dynamic, creative and empirical. Values integrity, teamwork and interpersonal relationships.

PROFESSIONAL EXPERIENCE

PepsiCo, Global R&D

Valhalla, NY

Equipment Engineer - Hardware Lead

Aug 23-Present

- Manage alpha and beta hardware development of PepsiCo's first Grab and Go (GNG) cooler
- Lead a group of 8-10 engineers and oversee HW development of cabinet assembly, refrigeration and electronics
- Oversee regulatory qualification of coolers with NSF, UL and FCC
- Oversee reliability testing such as transportation, vibration and cycle testing for cooler
- Work with OEMs, distributors and internal R&D team to assign and track project workflows/timeline
- Design and manage electrical diagrams, cable assemblies and cooler electronics
- Manage ECRs and track development/timeline
- Manage cooler data and publish dashboards to track unit health, sales trends, consumer behaviors
- Recommend and implement data-driven and strategic HW improvements to increase revenue
- Create and manage manufacturing, validation and deployment tools and processes for distributors and PepsiCo

Nanotronics Imaging

Brooklyn, NY

Electrical Engineering Associate

Apr 21-Jul 23

- Designed microcontroller-based electrical circuits, schematic and PCB layout using Altium Designer
- Prototyped PCB with SMT and through-hole components
- Developed C++ firmware and program boards for different applications
- Developed an API to interact with C++ firmware and circuit boards
- Documented line drawings and cable assemblies in Altium Designer
- Delivered a fully functional two-axis motor controller for nSpec's Transmitted Motorized Polarizer
- Delivered a 20-channel 16-bit DCA and ADC platform to test manufacturing equipment signals

Electrical Engineering Intern

Feb 21-Apr 21

- Designed schematics and PCB using Altium Designer, prototyped and programmed three fully functional boards

Research Foundation of CUNY

New York, NY

Researcher

Jun 20-Dec 20

- Analyzed remote sensing data obtained by the ECOSTRESS sensor and Landsat-8 satellite in Python
- Created maps using QGIS and ArcGIS to assess the effects of late spring frost in forest canopy of local forest
- Researched technologies and practices to mitigate orbital space debris in the lower earth orbit

Research Foundation of CUNY - New York, NY

Robotics Instructor and Robotics Competition Coach, BMCC

Sep 16-Jun 20

- Introduced HW and SW development using LEGO Mindstorms and VEX robotics equipment
- **Awards:** 1st and 2nd Place during the 2018 Annual STEP Robotics Competition, Adelphi University

EDUCATION

New York City College of Technology - Brooklyn, NY

Magna Cum Laude

Bachelor of Technology in Electrical Engineering Technology

Jan 21-Dec 22

- E/curricular: President, Electronics Technicians Association; Participant, NSF-Research Experience
- **Recognitions:** Dean's List, 2019

Borough of Manhattan Community College (BMCC) - New York, NY

Aug 15-Aug 17

Associate in Science in Engineering Science

- E/curricular: President, Robotics Club; Captain and Lead Programmer, Robotics Team; Researcher, CSTEP
- **Awards:** Honorable Mention in Engineering Research, CSTEP NY; Excellence in Research, BMCC BARS

SKILLS

Altium Designer; KiCAD, C/C++/ Python/Git; Arduino; MATLAB; LabVIEW; LEGO Mindstorms; RPis