

Mario A. N. Lopes

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Objective statement

Electrical Engineering major with experience in electrical and mechanical prototyping and consulting. Fast-learner who is passionate about engaging in new environments with multi-disciplinary teams to expand cultural background, improve efficiency of projects and materialize ideas with agility and reliability. Energetic about applying and expanding technical and essential skills in Summer 2022 internship/co-op.

Education

Georgia Institute of Technology | Atlanta, GA

B.S. in Electrical Engineering and Computer Science minor, 4.0 GPA

August 2021 – Present
Expected Graduation, May 2025

Sao Paulo University | Sao Paulo, SP, Brazil

Bachelor of Science in Mechanical Engineering (1st semester), 92.6% GPA

April – July 2021

Colegio Bandeirantes | Sao Paulo, SP, Brazil

Honors English, Advanced Spanish, Investment Club, Salutatorian (top 0.4%), 97.3% GPA

February 2017 – December 2020

Skills

Programming: Python, Java, MATLAB, JavaScript

Software: Eagle, GitHub, Siemens NX 10, SolidWorks, MATPOWER

Languages: English (fluent), Spanish (advanced), Portuguese (native), German (beginner)

Relevant Coursework: Computer Organization & Programming, Digital Systems Design, Data Structures & Algorithms, Introduction to Object-Oriented Programming

Experience

Power Systems Resilience and Fairness | Georgia Tech, Atlanta

October 2021 - Present

Undergraduate Research Assistant

- Research on new grid optimization algorithms that include socioeconomic, critical infrastructure parameters in operation
- Programmed database formatting and manipulation on US-wide datapoints with MATLAB and MATPOWER systems
- Enabling project's objectives by crafting data structures specifically to its needs using Object-Oriented Python

Georgia Tech Solar Racing (GTSR) | Atlanta

September 2021 - Present

Powertrain Subteam Lead

- Leads 8 teammates in technical development and repairs of SR-3 Solar Car's Powertrain system, evaluated in over \$60K
- Design and implementation of new inductor system, with 40% increase in space efficiency and reliability improvements
- Coordinated project's electrical and mechanical fabrication and installation, applying Eagle, soldering, SolidWorks training
- Writing technical document on car's every electrical system to help new/current members engage with the team

HackGT 8 | Atlanta

October 2021

Backend Developer

- Worked alongside CS-major teammates to ideate and build an educational logic-puzzle game for audience of children
- Responsible for development and implementation of game mechanics through JavaScript programming
- Developed the stage building and validation tree-search algorithms that made the team's idea possible

Poli Junior Consulting | Sao Paulo, SP, Brazil

April – June 2021

Mechanical Trainee

Largest student-run consulting firm in Brazil. Over R\$3 million in revenue in 2021.

- Designed Pulse Width Modulation system and 3D modeled prototype light system – project selected among 150+ others
- Participated in brainstorming, 3D modeling and feasibility study with multidisciplinary team for phone support prototype
- Took part in intensive, 2-week course on SolidWorks – modeling, meshing, and tension and photorealistic simulations

Volunteering

The HIVE | Georgia Tech, Atlanta

January 2021 - Present

Peer Instructor

- Responsible for maintaining Interdisciplinary Design Commons campus makerspace (student-run)
- Being trained on electronic benchtop equipment, 3D printers, laser cutters, wood shop tools, and PCB fabrication to aid users in their projects as a volunteer mentor