

# Diego A. Lopez G.

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## SUMMARY

As a senior mechanical engineering student, I possess strong leadership skills and excel at merging mechanical and electronic approaches to develop innovative solutions. My experience includes leading and working on international interdisciplinary teams, showcasing my proactive and adaptable nature. Always eager to learn, I quickly adjust to new environments.

## EDUCATION

### Universidad de La Sabana

B.S. Mechanical Engineering (GPA: 3.46 / 4.00)

Colombia

Senior

## EXPERIENCE

### Visiting Student Scholar

SPARK Laboratory - University of Kentucky

Lexington, KY

September 2023 - Ongoing

- Contributed significantly to the mechanical design of two lab prototypes, with a primary focus on advancing electric machines, particularly in the realm of electric vehicle (EV) traction.

### Head of Instrumentation

Project Polaris - AREX

March 2022 - March 2023

- Led an international team of over 20 people in constructing a prototype for a Titan explorer (Saturn's moon) in under 21 business days.
- Coauthor and selected speaker of the paper 'Creating a Terrestrial Rover Prototype for a Titan Rover Concept' presented at the International Astronautical Congress (IAC) 2022 celebrated in Paris, France.
- Directed the international team of over 5 people responsible for selecting, programming and implementing the instrumentation for the mentioned Titan explorer. Employed **Raspberry Pi** with **Python** code and **Arduino** as controllers for the instrumentation. Implemented **Autodesk Inventor** for designing custom **3D printed parts** meant for assembly.

### Leader of Electronics

UHEV - Universidad de La Sabana

Colombia

August 2019 - March 2023

- Developed the electronic speed controller for ultra-efficient electric vehicle's 3 phase motor using **KiCad** for **PCB** design. Performed **manual soldering** of through-hole components.
- Received an honorific mention for the innovative technical design at Shell Eco-Marathon Brazil 2022.
- Contributed using **Autodesk Inventor** to produce the design and **Fusion 360** for CNC routing.
- Collaborated to manufacture carbon fiber bodywork and additional parts for the vehicle using the wet lay-up method.

### Laboratory Intern

Tecnologico de Costa Rica

Costa Rica

Summer 2022

- Assisted the design of a Mobile Ground Station capable of Communicating with partner's satellites. Design implemented using **Autodesk Fusion 360**.
- Evaluation of a faulty Li-Ion battery pack implementing **LabVIEW** program.

## SKILLS

Excellent written and verbal communication, hands on experience, strong interpersonal skills with demonstrated effectiveness in a team environment., can-do attitude and result oriented.

MATLAB, C/C++, Python, Machine Learning, Autodesk Inventor, Autodesk Fusion 360, FEA, HyperWorks, Linux, LabVIEW, KiCad, Microsoft Office (Excel, Word, PowerBi), LATEX.

Spanish (Native), English (C1 - professional working proficiency), German (Beginner).

## HONORS AND AWARDS

- Winner of the 2019 Excellence Scholarship awarded by Universidad de La Sabana department of engineering.
- Winner of the 2021 Sabanahack hackathon awarded by Prodigious and Universidad de La Sabana.
- Certified C1 English level (IELTS 7.5 Overall Band Score).