Andres Perez

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EDUCATION

University of Notre Dame | Notre Dame, IN — May 2028
Bachelor of Science — *GPA: 3.77*
Major: Computer Engineering| Minor: Engineering Corporate Practice

EXPERIENCE

Long Beach Unified School District | Carson, Ca — Sep. 2022 - May 2023; Aug. 2023 - May 2024
Student Tutor

- Fostered an academic environment by leading peer-based pedagogy and promoting collaborative learning.
- Provided tutoring in subjects, including Geometry, Algebra 2, AP Pre-Calculus, AP Calculus AB & BC, AP Physics 1, AP Computer Science Principles, Computer Science Essentials, and Intro. To Japanese.

University of Notre Dame | Notre Dame, In — Aug. 2024 - Present
Student Researcher

- Assisting Prof. Chaoli Wang with research by data labeling image data and downloading GSV data of households, surveying heat dissipation in household.

LEADERSHIP AND ACTIVITIES

Long Beach Unified School District | Carson, Ca — Aug. 2023 - Jun. 2024
Ailurus Industries Electrical Sub team

- Collaborated with a team of 30+ students to design, manufacture, and construct modular robots capable of reconfiguration for versatile tasks, including artifact retrieval.
- Enhanced UPenn's SMORES-EP cubic model by integrating an ESP32-UWB microcontroller, implementing a bevel gear design for differential drives. Applied NASA soldering standards in designing both physical body and electrical layouts, maintaining a 5-inch cube constraint for each module.

Long Beach Unified School District | Carson, Ca — Aug. 2021 - Oct. 2023
Vex Robotics Captain

- Led a team of 12 juniors and seniors in designing and constructing a competitive robot for a State-Level competition.
- Structured team meetings, facilitated performance reviews, and guided iterative improvements through targeted feedback.
- Established a partnership with a local high school VEX robotics team to co-host competitions and participate in joint scrimmages, enhancing community engagement and collaborative learning.

PROJECTS

IrishSat - GoatLab | University of Notre Dame | C, Python, KiCad, Electronics Soldering — Aug. 2024 – Present

- Engineered a Python-based solution to streamline data acquisition from a magnetometer and Arduino, converting raw serial outputs into MATLAB-compatible formats for advanced analysis.
- Designed a custom Arduino R3 hat PCB using KiCad to integrate and optimize Arduino and H-bridge circuits, improving system efficiency and reducing assembly complexity.
- Collaborated under expert mentorship to refine IrishSat's Helmholtz Cage design, leveraging KiCad for PCB design, MATLAB for data processing, and Raspberry Pi for system integration and control.

Portfolio Website | andres-perez0.github.io | Astro, Git, HTML, CSS — July 2024 – Present

- Developing a portfolio website with Astro and Tailwind CSS frameworks as the frontend.

TECHNICAL AND LANGUAGE SKILLS

Technical: C++, C, Python, Git, HTML, CSS, KiCad, SolidWorks, Fusion 360, Google Suite, Electronics Soldering
Language: English (Native or bilingual proficiency), Spanish (Native or bilingual proficiency)

I learned the fundamentals of Game Theory through The Battle of Polytopia