# Otavio Paz Nascimento

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## EDUCATION

**Oberlin College**                                                                                                    **Oberlin, OH**
*BS in Computer Science & 3-2 Engineering (GPA: 3.95)*                                               *May 2026*
- Oberlin Robotics [Founder/President]
    - Founded the first robotics club on campus and secured **$4,000+ in materials**.
    - Led **50+ hours of workshops** on drones and robotics for undergraduate students.
- Brazilian Association [Founder/Secretary]
    - Organized 5+ events featuring Brazilian food and music, attracting over 40+ participants each.
    - Hosted 2+ Brazilian Samba music events with **250+ visitors**.
- International Student Org. [Program Coordinator]
    - Coordinated 10+ cultural events, such as country-themed food nights, chai nights, and game nights, with participation from **120+ students**.

**Federal Institute of Sao Paulo - Salto**                                                                     **Salto, SP**
*High School diploma & Occupational Course in Industrial Automation (GPA: 9.64/10.00)*    *February 2021*
- Robotics Club [Member]; Skybotz Drone Team [President]; Class Committee [President]

## EXPERIENCE

**Office of Energy and Sustainability at Oberlin College**                                      **Oberlin, OH**
*Lead Energy Detective*                                                                                *October 2022 - Present*
- Analyzed campus-wide energy and water usage using BuildingOS, **managing 10+ tracking spreadsheets** for **80+ buildings** to identify inefficiencies.
- Successfully **identified 20+ malfunctioning meters**, uncovering a loss of **$30,000+** for the city.
- Developing software to validate utility billing data and School's system using PyQt.

**Computer Science Department at Oberlin College**                                              **Oberlin, OH**
*Lab grader*                                                                                        *February 2023 - November 2024*
- Graded **250+ Python labs** on Repl.it and GitHub Classroom for CSCI 150 (Introduction to Computer Science) sections, providing detailed feedback and guidance to students.
- Analyzed code submissions and ensured grading accuracy and consistency.

**Academic Advising Resource Center at Oberlin College**                                    **Oberlin, OH**
*Peer Tutor*                                                                                              *February 2024 - Present*
- Supported **20+ students** in mastering Computer Science, Physics, and Mathematics concepts.

## PROJECTS

**Renewable Energy Hybrid System at Oberlin College**                                       **Oberlin, OH**
*Co-Developer*                                                                                        *September 2023 - Present*
- Co-designed a **1.4kW** off-grid solar panel and micro wind turbine system for Shagbark Learning Center.
- Participated at RE+ 2023 in Las Vegas and DWEA 2024, earning industry recognition and expanding personal network.
- Secured **$3,500 grant** from REpowering Schools and **$1,600** from Green Edge Fund to support project implementation.

**Autonomous vehicle with LiDAR system (TurtleBot3/4)**                                   **Oberlin, OH**
*Student Researcher (Computer Science Department)*                                        *September 2023 - Present*
- Acquired foundational skills in **ROS** and **Gazebo** for robotic simulations.
- Successfully assembled and configured TurtleBot 3 Burger hardware and software components, ensuring optimal system performance.
- Improved the product's documentation for a better user experience with the guidance of Prof. McCarrin.
- Adapted Deep Reinforcement Learning Navigation framework to new version of LiDAR sensor.

**Design and Fabrication of Soft Robotic Actuators using Dragon Skin™ and Iron Powder**        **Oberlin, OH**
*Student Researcher (Oberlin College Research Fellowship)*                                 *June 2023 - July 2023*
- Prototyped muscle-like actuators using DragonSkin™ infused with iron powder, evaluating **5+ designs** through **25+ iterations**.

- Enhanced skills in prototyping, FDM 3D printing, silicone molding, data analysis, and collaboration within a research environment.
- Demonstrated the potential of low-cost soft robotics applications by decreasing manufacturing costs by **1/3**.

**Papa Tick (IFSP/Salto & Biological Institute of Sao Paulo)**                    **Salto, SP**
*Co-Inventor and Product Manager*                    *October 2019 - January 2022*
- Developed and patented (BR2020210146155) a solar-powered electric trap system, surpassing competitive solutions by extending tick attraction duration by **80%**.
- Implemented functionality in C, systematically validating performance through rigorous lab testing.
- Designed in 3D CAD (**SolidWorks**) and circuit diagrams.

**Captain - Skybotz Drone Team**                    **Salto, SP**
*Co-Developer and Captain*                    *October 2018 - January 2021*
- Organized **300+ in-person and online meetings** to develop three semi-autonomous drones with Raspberry Pi and computer vision.
- Led the construction and marketing of a team of 13 people during the SAE Formula Drone competition. Team achieved 4th place in 2019.

## VOLUNTEERING

**NGO LGBT+ do Brasil**                    **Indaiatuba, SP**
*Video editor*                    *April 2021 - April 2022*
- Created motion graphics for the segments of an LGBT+ NGO in Brazil (TV/Radio/Podcast/Store), added subtitles, and made videos and live stream edits for Instagram and IGTV.
- Developed 2 filters for donation information using Spark AR.

**II Inclusive Fair in Salto**                    **Salto, SP**
*Volunteer Student*                    *August 2018*
- Led 3 educational sensory experiences/videos (mysterious touch box, sound game, and deafness simulation) to raise awareness of different disabilities among **100+ children**.

## CONFERENCES

**Brazil at Silicon Valley**                    **Sunnyvale, CA**
*Student Leader*                    *April 2024*
- Invited to attend the prestigious Brazil at Silicon Valley 2024 conference, an invite-only event in the Bay Area connecting Brazil's leading entrepreneurs, investors, and policymakers in technology.
- Chosen as **1 of 23 students** from over **1,000 applicants** by Fundacao Estudar.

**Distributed Wind Energy Association Conference**                    **Arlington, VA**
*Student Researcher*                    *February 2024*
- Presented the design of a hybrid energy system to **15+ stakeholders** and field engineers.
- Gained in-depth knowledge of energy grid policies for utility-scale wind and hybrid systems.

## AWARDS AND HONORS

**John F. Oberlin Scholarship** - $20,000/year
**Best Beginners Hack** - HackHolyoke (2022)
**Kyle Lam Hacker Scholarship** - $6,575 (2024)
**STEAM Generator Scholarship** - $1,000 (2024)

## SKILLS

**Computer skills:** Python, Rust, C/C++, Arduino, ROS, Gazebo, Docker, Adobe Photoshop, After Effects, Premiere, SolidWorks, and Microsoft Office.

**Languages:** Portuguese (Native), English (Advanced), Spanish (Intermediate), Brazilian Sign Language (Intermediate), American Sign Language (Basic).

## INTERESTS

**Hobbies:** F1, robotics, hiking, drones, baking, traveling the world, neuroscience of lucid dreams, gaming, innovation, and reading books on sci-fi.