

Fernando J. Vázquez-Cosme

fernando.vazquez3@upr.edu | <https://fernandovazquezcos.wixsite.com/home>

<https://www.linkedin.com/in/fernando-j-vazquez-cosme/>

Undergraduate B.S. in Mechanical Engineering

Research & Work

I'm interested in strengthening the symbiotic relationship between society and nature, establishing a mutual benefiting cycle. I like to integrate practices of sustainability in my daily life and solving problems dealing with this topic are at the core of my beliefs.

My first 3 years at UPRM were in Industrial Engineering, where I worked on engineering education and data mining. I transferred in 2020 to Mechanical Engineering, where I have now worked with synthetic biology, bioreactors, animal behavior, and currently in robotics and product design.

Education

2019 - Present | **University of Puerto Rico, Mayagüez**, Mayagüez PR
B.S. in Mechanical Engineering (**transfer**)

2017 - 2019 | **University of Puerto Rico, Mayagüez**, Mayagüez PR
B.S. in Industrial Engineering

Experience

Jun 2021- Aug 2021 | **Student Researcher – Biomimetics and Soft Robotics**
University of Nevada, Reno
Advisor: Dr. Jennifer L. Hoy
Worked in understanding the effect of olfaction in natural prey capture behavior in mice. Designed and built a novel airflow arena to run experiments with mice.

Jan 2021- Jul 2021 | **iGEM-RUM Lead Engineer**
University of Puerto Rico, Mayagüez
Worked in designing a bioreactor to hold genetically engineered bacteria for the explosive bioremediation of local military impacted sites. I was in charge of the engineering division and designing the bioreactor within the iGEM Synthetic Biology team.

Jan 2021- Jul 2021 | **Deep Data Mining Undergraduate Researcher**
University of Puerto Rico, Mayagüez
Advisor: Dr. Saylisse Dávila
Developed a classification model in R to predict a HS student's major choice at UPRM using advanced knowledge extraction and statistical learning. I later assessed the summer camp's effectiveness in teaching and recruiting competent students.

Presentations

- 2021 | **Undergraduate Research Symposium at University of Nevada, Reno**
Reno, NV
Poster: Effect of olfaction on mice prey-capture behavior
- 2021 | **Industrial and Systems Engineers (IISE) Conference**
Virtual
Talk: Overcoming the challenge of offering an interactive and virtual experience
- 2021 | **Socially Responsible Operations Research Center**
Mayagüez, PR
Poster: Can a Summer camp make HS students more likely to pursue an engineering career?

Scholarships and Awards

- 2021 | **Amgen Biotechnology Training and Learning Enhancement for Students Program (BioTalents)**
Amgen BioTalents provides select undergraduates from PR an in-depth training in biomanufacturing. The program utilizes a strong hands-on and interdisciplinary approach, and includes biomanufacturing, industrial environment, and management leadership tracks.
- 2021 | **Hispanic Scholarship Fund Scholar**
Scholar program that aims to empowers students to successfully complete a higher education, provide services and scholarships to exceptional students.
- 2019 | **Puerto Rico Louis Stokes Alliance for Minority Participation**
The PR-LSAMP award is granted to undergraduate students of the main higher education institutions in Puerto Rico to increase the quantity and quality of minority and low-income college students who successfully complete a baccalaureate degree in science, technology, engineering, or mathematics (STEM).

Service and Mentorship

Oct 2020 – Mar 2021

UPRM Research Fair Logistics

Communicated with professors, hosted events and presented novel ideas at the logistics division to help create and run the 1st ever campus-wide science fair at UPRM.

Jun 2019 & 2020

Real Time Process-Control (RealTimePC) Summer Camp

Designed and presented interactive educational workshops for HS students. Developed infographics summarizing the camp's achievements. Led groups of 5-6 HS students multiple times developing teamwork and communication within groups.

Aug 2019 – May 2020

Institute of Industrial and Systems Engineers (IISE) UPRM

Coordinated a novel mentorship program, recruited a team mentors, and organized interactive activities as a team, to develop mentees in the program.

Aug 2018 – May 2019

Student Counseling

Mentored 1st year students with workshops and helpful meetings throughout the year.