

Michael Gutierrez

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EDUCATION

California Institute of Technology (Caltech)

Pasadena, CA

- Pursuing BS in Mechanical/ Electrical Engineering, minor in Aerospace Engineering

2021-2025

Carnegie Mellon University/ University of South Florida/ Pine View School

Pittsburgh, PA

- 19 college/ college-level courses through Dual Enrollment and Advanced Placement (AP)
- Sample coursework: Economics, Physics, Single and Multivariable Calculus, Differential Equations, Electricity/ Magnetism, Organic Chemistry equivalent to approx. 60 credit hrs.

Osprey, FL

2016-2020

SKILLS

- SOLIDWORKS, MATLAB, Autodesk Fusion, Python, TensorFlow/ Keras, WordPress, CSS, HTML, JavaScript, PHP, Microsoft Office, data analysis, math modeling, CNC machines, 3D printing, mechanical design, prototyping, machining, fabrication, and woodworking

EXPERIENCE

H2Ok Innovations

Boston, MA/Remote

Hardware Engineering Intern

09/2020-Present

- Lead hardware team and collaborate with software engineers; organize and integrate efforts to develop a suite of novel, low-cost, and patentable remote water sensors
- Identify and resolve water analysis needs of industrial customers for process improvement and cost savings, e.g. in-situ water chemistry measurement, real-time data analytics, etc.
- Design plug-and-play sensor frameworks using 3-D CAD and simulation programs
- Fabricate, test, and deploy sensing solutions; run on-site beta tests with customers

Center for Advanced Technology & Innovation, State College of Florida

Bradenton, FL

Incubator/ Accelerator Program Intern

09/2020-Present

- Assist in workshop and event planning for pilot cohort of the Veterans' Business Incubator
- Create prototyping/product development procedures for new entrepreneurs
- Negotiated program-wide affiliate membership agreements

PrimeGrid

Remote

Administrator/ Challenge Coordinator/ Volunteer

03/2017-Present

- Develop, test, and update algorithms for use with 1.7 TFLOP distributed computing grid
- Manage PR, social media presence, and online forums; create monthly challenge contests
- Communicate project results to members and the wider mathematics community

Suncoast Science Center/ Faulhaber Fab Lab

Sarasota, FL

Steering Committee Senior Member/ Web Developer Intern/ Volunteer Instructor

10/2018-09/2020

- Collaborated on development of theme, processes, and logistics of the annual RC car race
- Presented weekly workshops on CAD software, RC car design and engineering concepts
- Developed and taught the curriculum for a 5-day course in game theory
- Designed and launched COVIDucation.net for the Sarasota County School Board
- Manufactured and distributed personal protective equipment during the COVID outbreak

LEADERSHIP/ HONORS

2016-2020

- **National Champion, 2020 MathWorks (M3) Challenge:** Our paper and video presentation ranked 1st out of 760 teams. We analyzed data and modeled a three-set solution regarding the transition from diesel to electric-powered commercial vehicles under a 14-hour deadline.
- **QuestBridge Scholar:** Selected from 5,842 finalists to receive a full ride scholarship to Caltech
- **National Merit Scholar:** Top 1% of high school students nationwide
- **Extensive leadership experience,** including Student Body Treasurer, President of Mu Alpha Theta, VP of Speech and Debate, and Captain of the Humorous Interpretation division