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Amiable leader driven to improve the health and happiness of the world, through science and relationships.

WORK EXPERIENCE

Sorted by: END DATE

Founder at DevelopYours

Sep. 2023–Present

- Perform data analytics and develop software tools for small businesses. Grow partner network. Write and secure work contracts. Maintain client websites. Debug software. Review and edit client articles.

Project and Innovation Manager at Fire Neural Network (FNN)

June 2022–June 2023

- Sought external technologies, people, and opportunities, while fostering partnerships to bolster FNN.

Particle Physics Researcher for the Compact Muon Solenoid (CMS) Experiment

May 2017–Aug 2022

- Designed statistical framework [**C++**, **ROOT**] to analyze data produced by the Large Hadron Collider (LHC) from which expectations were placed on the world's most precise value of the Higgs boson mass.
- Architected and implemented a competitive kinematic correlation model [**Python**, **Git**] between muon momentum and track impact parameter which improved muon momentum resolution by 20%.
- Performed longevity studies on muon-detecting Cathode Strip Chambers (CSC) and a Mini-CSC by irradiation with caesium-137 to replicate expected High-Luminosity LHC conditions [**LabVIEW**].
- Tested, validated, and optimized the performance of CSCs to be commissioned to the CMS experiment using local data acquisition software [**Linux**, **Bash**]. Presented formal updates to working group.

Co-Founder, Director, and Archivist for the Physics Graduate Community

Mar. 2019–May 2022

- **Director duties:** Responsible for PGC budget (\$2K/yr) for "Grad Gatherings" (avg attendance = 30). Instituted weekly Grad Student & Postdoc Seminars (avg attendance = 18, separate budget = \$1.2K/yr). Established mentoring program (6 mentor-mentee pairs). Grew team from 5 to 10 organizers and coordinated 22 other volunteers. Summarized activities to faculty. Delegated action items to organizers.
- **Archivist duties:** Created, organized, maintained, and updated group documents. Managed Slack group.

Co-Lead Data Analyst for the GatorsBEATWaste Station (GBWS) at UF

Jan. 2019–Dec. 2021

- Invented analyzer [**Jupyter**] to calculate diversion (65%) of experimental GBWS in student union.
- Co-created an easy-to-update database [**MS Excel**] to record recycle/compost/landfill-audited items.
- Coordinated, led, and presented at meetings with the UF Office of Sustainability and Business Services.

Founder and Director of the UF CMS Student Community

Aug. 2019–Aug. 2021

- Developed extracurricular program for grad/undergrad students to deepen particle physics knowledge.
- Delivered lectures/tutorials [**LaTeX**] on the CMS experiment, particle physics, and programming.
- Devised mentorship program to facilitate undergrad learning of graduate-level particle physics research.
- Delegated tasks to organizers. Managed Slack group. Wrote quizzes, homework, programming projects.

AWARDS (University of Florida)

- **Tom Scott Memorial Award** for distinction in research in experimental physics. Dec. 2021
- **Charles F. Hooper Jr. Memorial Award** for distinction in leadership and teaching. Dec. 2020
- **University-Wide Graduate Student Teaching Award** for excellence in teaching. May 2018
- **Wayne R. Bomstad II Memorial Award** for excellent teaching in the laboratory. Dec. 2017

EDUCATION (University of Florida)

- Ph.D. / M.S. in Physics Aug. 2022 / June 2018
- B.S. in Chemistry (cum laude), with minors in: Classical Studies, Education June 2011

PERSONALITY and SUPERPOWERS

- Meticulous. Amicable. Organized. Relishes gardening, weightlifting, and the tranquility of the forest.
- Jake of all trades, master of pun. Top-tier name-creator. Expert packer of things. Can fold a fitted sheet.

"The most important step one can take is the next."