First name Last name

email@domain.com https://www.linkedin.com/in/First name-Last name/ https://github.com/profile

Objective Statement

Physics major seeking an internship with NASA Jet Propulsion Laboratory working on physics simulations of California wildfires through data gathered from the multi-angle Imaging SpectroRadiometer (MISR). I want to mitigate harm from future climate change-induced refugee crises.

Education

University 1 **September 2019 – June 2023**

B.S. Physics: Applied Physics concentration into Computer Science

GPA: 3.85

Volunteer Experiences

Nonprofit Organization **October 2017 – August 2019**

Volunteer *Nonprofit Organization*

- Used ArcGIS software to analyze LANDSAT raster datasets and uncover geospatial regions of high nonprofit density
- Created a public, searchable ArcGIS-based guide to inform the homeless about nonprofit resources (rcrchelp.org)
- Presented development of ArcGIS-based guide (see "Presentations / Publications" section)
- Taught Redlands Charitable Resources Coalition (RCRC) how to use ArcGIS

Academic Experiences

University 1 Lab **February 2020 – Present**

Undergraduate research assistant (under Dr. First name Last name) *City, State*

- Created an FPGA-based PLL with a lock-in amplifier, PI controller, and I/O through LabVIEW
- Built an atomic force microscope (AFM) with SolidWorks.

University 2 Last name Research Group **June 2021 – September 2021**

Undergraduate research assistant (under Dr. First name Last name) *Virtual*

- Configured genetic programming for symbolic regression
- Programmed ODE simulations for mass-spring damper and discretized linear beam dynamical systems
- Audited graduate-level course in model order reduction: *MAE 207 – Model Reduction*
  https://github.com/profile/project0

Related Coursework

Physics: Classical Mechanics, Thermal Physics, Lower-division physics
Computer Science: Lower-division computer science, Discrete Mathematics
Mathematics: Ordinary Differential Equations, Linear Algebra, Multivariable Calculus

Skills

Programming: C++, MATLAB, Python
Engineering: SolidWorks, LabVIEW
Other: ArcGIS, LaTeX

Extracurricular Activities

University Undergraduate Research Journal **September 2021 – Present**

Editorial board member *University*

- Assisted in the publication of academic papers produced by undergraduates at University

Mentor Collective **August 2021 – Present**

Mentor *University*

- Mentored 5 undergraduate freshmen, thus assisting them transition to college life
  3 physics, 1 engineering, and 1 biology major

Independent Programming Projects

Image Processing GUI | *Python: Tkinter, Matplotlib, OpenCV, Numpy* **In progress**

- Tkinter-based Python GUI for basic image processing and computer vision
  https://github.com/profile/project1

University faculty web scraper | *Python: Selenium, Bs4, Pandas* **In progress**

- Python script that web scrapes University faculty information into an exportable table
  https://github.com/profile/project2

Presentations / Publications

University graduate school program Closing Ceremony **August 2021**

- Nominated to present physics-based artificial intelligence research at graduate school program closing ceremony
  1 of 2 nominees out of 60+ students

University 2021 Summer Research Conference **August 2021**

- Conveyed how to use artificial intelligence to derive physical laws from experimental data
  1 of 13 "Student Spotlight" honorees out of 400+ students

MSRIP/UC LEADS/Cal Pre-Doc Symposium **August 2021**

- Conveyed how to use artificial intelligence to derive physical laws from experimental data

UC LEADS 2021 Koret Leadership and Research Symposium **March 2021**

- Presented FPGA-based quartz tuning fork sensor for atomic force microscopy
  1 of 3 "Honorable Mentions" in engineering out of 20+ students

UC LEADS 2020 Summer Symposium **July 2020**

- Presented methodologies for developing an LIA and optimizing FPGA memory consumption

Geospatial data science: various venues **October 2017 – August 2019**

- Advocated for and demonstrated geospatial methods of sharing nonprofit data:
  - **Secret City City Hall**: conveyed the need for more haircut/shower resources for the homeless
  - **Secret City Convention Center**: demoed ArcGIS-based resource guide at 2018 ESRI User Conference
  - **University of Secret City**: served on panel to answer questions from Secret County foster youth
  - **Secret City Country Club**: demoed ArcGIS-based resource guide to the Nonprofit Organization 1
  - **Secret City Mitten Building**: demoed ArcGIS-based resource guide to the Nonprofit Organization 2

Awards & Honors

University 2: "Student Spotlight" honoree at 2021 Summer Research Conference **August 2021**

University 2: Nominated to present research at University graduate school program Closing Ceremony **August 2021**

University 1 Dept. of Physics: Outstanding 2nd-Year Undergraduate Student **June 2021**

University 1 Dept. of Physics: Outstanding 1st-Year Undergraduate Student **June 2020**

UC LEADS: Honorable mention at Koret Leadership and Research Symposium **March 2021**

University 1: Chancellor's Honor List **2020-2021 academic year**

University 1: Dean's Honor List **2020-2021 Fall, Winter, and Spring academic quarters**

Hobbies & Interests

Hobbies

- Reading (history, philosophy, political science, social science)
- Teaching
- Programming (https://github.com/profile)

Interests

- Computational physics
- Model order reduction
- Neural networks and evolutionary algorithms
- Fluid dynamics (i.e. wildfires)