SARAH PUNGITORE

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EDUCATION

University of Arizona, Tucson, AZ — GPA: **3.94** out of 4.0
3rd year PhD Student, **Applied Mathematics**
Master's in **Applied Mathematics**

Lafayette College, Easton, PA
B.S. **Biology**/Minor **Mathematics** — GPA: **3.92** out of 4.0

WORK EXPERIENCE

Data Science Intern, United Parcel Service, Atlanta, GA — **June 2021 – August 2021**
Supervisor: Elizabeth Barayuga, Principal Data Scientist
Presented analysis of inbound and outbound package data from the Cologne (DE) hub, the largest European UPS hub; created model to predict actual weights and dimensions from manifest (user-input) quantities; produced data and model visualizations with PowerBI.

2021 UPS Hackathon Participant, United Parcel Service, Atlanta, GA — **July 2021**
Collaborated with team of data scientists and web developers over 48 hours to produce Neurodrive, a framework using random forest and LSTM models to predict aggressive driving behaviors; trained machine learning models using Google Cloud Platform; presented project overview and dashboard demo to UPS leadership, including the CEO and CIEO; placed in the top 4 out of 24 teams.

RESEARCH EXPERIENCE

Graduate Research Intern, Los Alamos National Laboratory, Los Alamos, NM — **June 2020 – May 2021**
Supervisor: Dr. Ruian Ke, Staff Scientist
Processed yearly mortality data from Ecuador in Python; produced descriptive analyses of excess deaths with respect to the COVID-19 epidemic in Ecuador; implemented compartmental model in R describing time to death and determined parameters by fitting model to COVID-19 death data; performed literature search on excess death methods; hosted meetings with undergraduate researchers to discuss research goals and divide workload appropriately.

Graduate Researcher, University of Arizona, Tucson, AZ — **April 2020 – Present**
Supervisor: Dr. Molly Douglas, Clinical Assistant Professor
Cleaned and summarized COVID-19 patient data from Banner Health (Phoenix, AZ); implemented decision tree algorithm using Python to predict whether a patient requires a ventilator; accessed and deidentified data using the Box API; presented methods and data summaries to both the Applied Math and Surgery departments.

PUBLICATIONS

Cuéllar L., Torres I., Romero-Severson E., Mahesh R., Ortega N., Pungitore S., Hengartner N., Ke R. Excess deaths reveal the true spatial, temporal and demographic impact of COVID-19 on mortality in Ecuador. Int J Epidemiol, 2021.

Cuéllar L., Torres I., Romero-Severson E., Mahesh R., Ortega N., Pungitore S., Hengartner N., Ke R. Excess deaths reveal unequal impact of COVID-19 in Ecuador. BMJ Glob Health, 2021. 6(9).

Cuéllar L., Torres I., Romero-Severson E., Mahesh R., Ortega N., Pungitore S., Hengartner N., Ke R. Assessing the impact of human mobility to predict regional excess death in Ecuador. Scientific Reports, 2022. 12(1): 370.

TEACHING EXPERIENCE

Teaching Assistant, University of Arizona, Tucson, AZ — **August 2020 – May 2021**
Hosted virtual office hours to assist college algebra students with questions regarding course content; communicated with instructors on weekly basis to provide feedback on student progress; graded assignments and provided constructive feedback to students.

ACTIVITIES

Mentor Coordinator, Women in STEM Mentorship Program, University of Arizona, Tucson, AZ (January 2021 – May 2021)
Volunteer and Husbandry Technician, Southern Arizona Reptile Rescue and Education, Tucson, AZ (September 2019 – Present)

SKILLS

Programming and markup languages: Python (scipy, numpy, pandas, scikit-learn), R, SQL, HTML5, CSS
Software and IDEs: Microsoft Office (Excel, Word, Powerpoint), GitHub, Google Cloud Platform, PowerBI