Angel Umana

Contact

angel.d.umana@gmail.com
angelumana.com
linkedin.com/in/angelumana
github.com/ibidyouadu
(703) 859-2613
Annandale, VA

Education

George Mason University
B.S. Physics & Math
Aug 2015 – Aug 2020

Tech Skills

- Excel
- Python
- R
- SQL
- MATLAB
- git
- LaTeX
- Linux

Languages

- English
- Spanish

Relevant Experience

Associate Data Scientist, Rare,
June 2021 – Present
Working with the science and technology team under the Fish Forever program. In this role, I help to maintain and develop data tools/infrastructure as well as provide data wrangling for researchers.

Student Researcher, GMU Volgenau School of Engineering,
July 2019 – May 2020
Explored the use of social media data and its application in natural disaster assessment using Python's data science stack and Excel.

- Collected demographic, socioeconomic, hurricane assistance, and weather data from U.S. Census Bureau, Bureau of Economic Analysis, FEMA, and NOAA databases.

- Obtained power outage data with a public records request from the Florida Division of Emergency Management.

- Cleaned over 1 million tweets by removing special characters with regex and using Python's NLTK library to lemmatize tokens. Applied a keyword filter on the cleaned tweets to identify 30k disaster-related tweets.

- Developed algorithms to restructure weather and power outage data.

- Explored data:
  - Manipulated data with pandas.
  - Visualized data with matplotlib and seaborn.
  - Performed correlation analysis with statsmodel and SciPy

- Applied machine learning techniques using scikit-learn and TensorFlow:
  - Decision tree regression to predict hurricane damages.
  - Hierarchical and k-means clustering to identify patterns in power outages.
  - Random forest and BERT to classify tweets.

- Developed an NLP preprocessing technique to provide insight on keywords and increase accuracy from 93% to 95% on a BERT classifier.

- Documented work, presented findings, & co-authored conference paper.

Conferences

GMU OSCAR Celebration of Student Scholarship,
Fairfax, VA, May 2017

Shenandoah Undergraduate Mathematics and Statistics Conference,
Harrisonburg, VA, Oct 2018