Bruno Lopez

brunolopez15@yahoo.com | San Francisco CA, 94103 | Linkedin | Website

SKILLS

Python (Numpy, Pandas, sci-kit-learn, Tensorflow, BeautifulSoup)**, R** (dplyr, tidyr ggplot, caret)**, Machine Learning** (Random Forest, SVM, Regression, PCA)**, Deep Learning** (Object Detection, NLP, Image Classification)**, Statistical Analysis, Data Visualization, Data Pipeline Automation, Data Cleaning, Web Scraping, SQL, Data Mining, GIS, Linux, Git & Version Control. Google Earth Engine, Geospatial Data Science, Mentorship,**

EXPERIENCE

REMOTE SENSING DATA SCIENTIST **San Francisco, CA**

Orbital Sidekick *Feb 2022 - Dec 2022*

- I built data pipelines for object detection/classification, change detection, and atmospheric correction.
- Contributed to multiple machine learning projects including crop/forest speciation, fire change detection, time-series vegetation analysis, mineral mapping, and creating internal python modules for company use.
- Fused open-sourced and in-house data to create sophisticated machine-learning algorithms.
- Reproduced and adjusted methodologies from research papers to suit our business demands/goals.
- Mentored a Masters's degree student and supervised his machine learning projects.
- Integrated object-oriented programming principles into our data pipelines for easier reusability.

RESEARCH DATA ANALYST **Stanford, CA**

Stanford University *January 2021 - January 2022*

- I Contributed to multiple machine learning projects from start to finish which included identifying crop fields in Africa, object detection of houses, and analyzing soil characteristics from web-scraped data.
- Co-authored a paper that used causal forests to prove the ineffectiveness of cover crops in the U.S.
- Scripted programs to automate data extraction, data analysis, dashboard creation, report making, data visualization, web scraping, and machine learning for our lab group and handled version control using Git.
- Designed and implemented data pipelines for students improving their algorithm speed 2-10 times.
- Curated geospatial datasets for students for tasks such as object detection and image classification.

PROJECTS

OpenStreetMap (OSM) Geospatial Analytics

- I query OSM data for a specific category/region using python. I then extract the geometries for the region of interest and this creates a geospatial ML dataset. I am integrating open-sourced satellite imagery as a next step.
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Manga Face Detector

- I scraped manga pages from a website and sampled 100 random pages from one specific manga. I then labeled the faces from this subsample and I am training an object detection model to identify faces from unseen pages.

EDUCATION

University of California, Santa Cruz *Graduated June 2020*

Bachelor of Science in Earth Science (Data Analytics Concentration)) w/ Honors ***GPA 3.48***

Honors Thesis: "Assessing Long-Term Changes in Sea Surface Temperature Extremes".

Relevant Coursework: Programming Abstractions: Python, Data Analysis in the Environmental Sciences, Advanced GIS, Statistics, and Data Analysis in the Geosciences, Scientific Computing, Data Visualization.