MOYO AJAYI

Data Scientist

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SUMMARY

A passionate data scientist who integrates analytical and computational methods to share meaningful insight. Employers will be hiring a data scientist who is:

- experienced with more than 5 years of collecting, cleansing, analyzing, and reporting data-driven insights to a variety of stakeholders
- highly skilled in processing large (10s-100s GB) data sets with python (pandas) and R (tidyverse)
- adept in applied statistical modeling and machine learning using scikit-learn, tidymodels, and other relevant packages
- capable of working in sprint cycles to meet deadlines with quality work, and able to effectively iterate products with long-term goals

EDUCATION

PhD in Environmental Engineering 2016 - (Spring) 2021
Vanderbilt University, Nashville, TN

MS in Earth & Environmental Sciences 2014 - 2016
Vanderbilt University, Nashville, TN

Bachelor's in Environmental Biology 2010 - 2014
Columbia University, New York, NY

TECHNICAL SKILLS & EXPERIENCE

Programming (Advanced)	**Python**, Matlab, Tableau, LaTeX
Programming (Experienced)	**R**, **Git**, Web Scraping, Linux, **SQL**
Libraries & IDEs	**Jupyter, RStudio**, **Pandas**, **scikit-learn** numpy, **tidyverse, tidymodels**, PyTorch
Analytical Skills	**Time Series Analysis**, Feature Engineering, Multivariate regression Hypothesis testing
Data Management	**Cluster Computing (GPU), Data Wrangling**, Exploratory Data Analysis, Visualization (*e.g.* Dashboards)
Algorithms	Monte Carlo Simulation, Bayesian Hierarchical Modeling **Supervised Classification & Regression, Tree Classification**

RELEVANT EXPERIENCE

Data Science Research Associate, Data Science Institute Jul 2020 - Dec 2020
Leveraged ML Techniques to Predict Teacher Churn for the State of Tennessee *Remote Work*

· Programmed binary classification model (tidymodeling) to quantify the probability teachers (65k+) would depart school after spring term
· Developed a multitude of functions to clean and engineer features to run ML algorithms (*e.g.* Decision Tree)
· Quickly absorbed R and tidyverse programming with a GPU cluster to provide effective contributions to the project
· Coded collaboratively through git to build on top of existing code

PhD Candidate, Vanderbilt University May 2019 - Present
Collaborating with National Oceanographic and Atmospheric Administration (NOAA) *Oak Ridge, TN*

· Processed GBs of data from gas measurements taking place over the course of a year
· With pythonic programming (e.g. pandas, scikit-learn), the data was wrangled, cleaned, and analyzed to illustrate key insights from the study
· Employing advanced statistical analyses on large time series data sets
· Used random forest and other ML techniques modeling to fill gaps of missing data within the time series data sets

PhD Candidate, Vanderbilt University Jan 2018 - Present
Using Monte Carlo Simulation & Linear Programming to Optimize Sampling Design *Nashville, TN*

- Incorporated ARIMA methods to simulate to simulate individual gas emission measurements
- Aggregated gas emission simulations with Monte Carlo model to assess the emission variations within the calderas probabilistically
- Combined collaborator's linear programming model and my Monte Carlo simulation to optimize a novel gas sampling design

PhD Candidate, Vanderbilt University Jul 2017 - Present
Linking Greenhouse Gases and Volcanic Emissions with Data-Driven Strategies

- Orchestrated and implemented the scientific and logistic sampling design of more than 100+ samples of greenhouse gas measurements across two N. American volcanoes
- Ran inferential analyses to gain an understanding of the relationships between different locations within and between volcanoes
- Examined geospatial relationships between measurement sites
- Employed advanced statistical analysis to generate high-impact insight

MS Candidate, Vanderbilt University Oct 2015 - Aug 2016
Robust Statistical Analysis of Fugitive Methane Emissions at Hydraulically Fractured Sites *Oliver Springs, TN*

- Fashioned a mobile laboratory with state-of-the-art gas analyzer and accompanying equipment
- Implemented many variants of two-sample hypothesis (A/B) tests to separate the true amounts of normal background gases from fugitive leaks caused by hydraulic fracturing procedures

PROFESSIONAL DEVELOPMENT

Data Science Career Track (Python)
Online Data Science Education Platform

- Completed 100+ hours and over two dozen modules to gain certification
- Hundreds of hours on this platform were spent completing dozens of courses from basic programming to deep learning. Please click for certificates

Teaching Assistant
Introductory Earth Science Data-Emphasized Courses

- Created a series of four modules of three or more activities per module that guided students to learning the fundamentals of introductory earth sciences
- Generated class material that included dozens MATLAB and MS Excel exercises, twice-weekly pen and paper quantitative analysis, and introduction to modelling for advanced students

Summary of Relevant Courses

- Applied Statistics & Probability, Numerical Methods, Risk and Decision Analysis
  Intro to Statistics (undergrad), Intro to MATLAB (undergrad)

AWARDS

1st Place - Oral Presentation Sep 2019
National Association of Black Geoscientists

- Awarded 1st place for communicating results from gas sampling research in N. American volcanoes

Vanderbilt Summer Research Award Spring 2019
Vanderbilt Graduate School

- Successfully wrote a research proposal and was granted approximately $2000