MOYO AJAYI

Data Scientist

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SUMMARY

An impassioned data scientist who integrates analytical and computational methods to illuminate meaningful signals amongst the noise. Completed work reflects distinguished analysis and visualizations, which are communicated to all stakeholders through effective data narratives. In short, employers will be hiring a data scientist who is:

- highly skilled in cleaning, analyzing, and visualizing gigabyte-sized data sets with pandas and tidyverse
- adept in applied statistical modeling and machine learning using scikit-learn, tidymodels, and other relevant packages
- experienced working in sprint cycles to meet deadlines with quality work, and able to effectively iterate products with long-term goals
- a self-starter who works well with teams and uses git to code collaboratively with others
- able to communicate technical methods to stakeholders of varying levels of expertise

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, Causal inference
Data Management	**Cluster Computing (GPU), Data Wrangling**, Exploratory Data Analysis, Visualization (*e.g.* Dashboards, IoT)
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 and analyzed binary classification model to quantify the probability of teacher churn across the state of TN
· Used tidymodeling to evaluate and predict annual turnover for 65k+ teachers
· 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 causal and 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 this 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