

JOSHUA RIO-ROSS

DATA SCIENTIST

MATHEMATICIAN

ABOUT ME

I am a Mathematics Professor turned Data Scientist who loves making decisions amid uncertainty. I am an enthusiastic and determined problem solver—always refining my craft and always contributing to the culture around me.

SKILLS

- Supervised & Unsupervised Learning
- Natural Language Processing (NLP)
- Python (pandas, geopandas, statsmodels, sklearn, scipy)
- R (tidyverse, plotly, shiny)
- SQL
- Neo4J
- Tableau / Power BI
- Git/GitHub

DATA EXPERIENCE

DATA SCIENCE APPRENTICESHIP

Nashville Software School, Sep 2021-June 2022

Intensive part-time bootcamp focusing on data science fundamentals and problem solving. Used real-world datasets and included projects where findings were presented to stakeholders from the community.

- Wrangled data and performed exploratory data analysis using Python's pandas library and R's tidyverse packages
- Created data visualizations using matplotlib, seaborn, and ggplot2
- Performed geospatial analysis using geopandas and folium
- Gathered data through APIs and web scraping
- Retrieved and analyzed data using PostgreSQL and sqlalchemy
- Built and evaluated statistical and machine learning models using the scikit-learn and statsmodels libraries
- Applied natural language processing using the nltk and spaCy libraries
- Performed network analysis on graph data using Neo4j
- Built and deployed interactive data visualizations using the R Shiny library
- Source code version control with Git/GitHub
- Project management/tracking with GitHub project boards and issue tracking
- Interacted with AWS using the CLI and ssh

DATA ANALYTICS JUNIOR INSTRUCTOR

Nashville Software School, May 2021-Present

Taught four-month, intensive bootcamp focusing on data analytics fundamentals and problem solving. Used real-world datasets and included projects where findings were presented to stakeholders from the community.

DATA ANALYTICS APPRENTICESHIP

Nashville Software School, Jan 2021-June 2021

Intensive part-time bootcamp focusing on data analytics fundamentals and problem solving. Used real-world datasets and included projects where findings were presented to stakeholders from the community.

- Analyzed data using Microsoft Excel, including utilizing pivot tables and lookups, and connected to external data sources using the PowerPivot add-on
- Built and deployed dashboards using Tableau and PowerBI
- Wrangled data and performed exploratory data analysis using Python's pandas library
- Created data visualizations using matplotlib and seaborn
- Gathered data through APIs and web scraping
- Performed geospatial analysis using geopandas and folium
- Retrieved and analyzed data using PostgreSQL and sqlalchemy
- Source code version control with Git/GitHub
- Project management/tracking with GitHub project boards and issue tracking

✉ j.roross@gmail.com

☎ 505-670-6400

in <https://www.linkedin.com/in/jrioross>

🐙 <https://github.com/jrioross>

EDUCATION & CREDENTIALS

NASHVILLE SOFTWARE SCHOOL

Data Science Bootcamp, Graduating June 2022

Data Analytics Bootcamp, June 2021

YALE UNIVERSITY

M.A.R. Philosophical Theology

UNIVERSITY OF MISSOURI

M.A. Mathematics

ORAL ROBERTS UNIVERSITY

B.S. Mathematics

B.A. English Literature

DATA PROJECTS

[VANDERBILT UNIVERSITY MEDICAL CENTER REFERRAL NETWORK](#)

Python, SQLite, Neo4J

- Created a Google Site to show our analysis of VUMC's current referral network and the referral networks of VUMC's major competitors, as well as our recommendations for which specializations and communities would be best for expanding VUMC's referral network.

[KEEPTRADECUT SHINY APP](#)

Python, R, Shiny

- Built a Shiny App that updates daily by scraping KeepTradeCut's dynasty fantasy football data, transforming it in Python and R, and combining it with current NFL stats so the user can use recent performance and market trends to make decisions about player values.

[VANDERBILT ACCRE COMPUTER CLUSTER PERFORMANCE](#)

Python

- Analyzed computer-cluster log and scheduler data. Researched whether high-volumes of jobs completed on a rolling one-hour basis were correlated with scheduler unresponsiveness. Result: The number of jobs simultaneously running, not recently completed, correlated with unresponsiveness, with a jump at around 4,300 simultaneous jobs. Used logistical regression and checked calibration curve.

[AGGRAVATED BURGLARY IN DAVIDSON COUNTY](#)

Python

- Pulled data from the Census API and Nashville's REST API to build (Poisson and Negative Binomial) models of predictive factors for Nashville burglaries. Presented with ipywidgets, GeoPandas, and Folium maps in a RISE slideshow.

[FANTASY BASKETBALL RESEARCHER POWER BI](#)

Python, Power BI

- A dashboard to research fantasy basketball. Developed appropriate measures. Scraped, cleaned, normalized data in Python.

[URSA HEALTH HOSPITAL READMISSIONS](#)

Python

- Investigated and visualized hospital readmissions by hospital, service provider, PCP group, and PCP provider.

[LAHMAN BASEBALL PROJECT](#)

SQL

- Applied a Variety of SQL skills to a database with 23 data tables to answer questions about baseball history. Techniques used: CTEs, filtering, CASE WHEN, aggregation functions, window functions, correlated subqueries, recursive CTEs, OLAP functions, correlation

OTHER PROFESSIONAL EXPERIENCE

ASSISTANT PROFESSOR AND DIRECTOR OF DEVELOPMENTAL MATHEMATICS

Trevecca Nazarene University, Aug 2017-May 2021

- Taught: Statistical Analysis for the Sciences, Problem Solving, College Algebra, Intermediate Algebra
- Redesigned developmental mathematics curriculum by communicating with faculty about prerequisite mathematical knowledge, selecting/creating new content for courses, and developing measurable criteria for the program's success.

VISITING INSTRUCTOR OF MATHEMATICS

Lee University, Aug 2016-May 2017

- Taught: Introduction to Statistics, Contemporary Mathematics, College Algebra for Education Majors, Trigonometry

TRANSPORTATION MONITOR

Tennessee Department of Transportation, Nov 2015-June 2016

- Developed formulae for the allocation of agencies' federal grant funds
- Maintained Excel reconciliation documents to monitor agencies' progress on expending grant contract funds
- Processed invoices, ensured compliant documentation, and identified and interpreted invoice variances
- Clearly communicated to agencies the legal and accounting procedures for remedying invoice variances