

Rashaad Ratliff-Brown

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Education

Duke University <i>Master of Science in Interdisciplinary Data Science</i>	May 2023 Durham, NC
University of North Carolina - Charlotte <i>Bachelor of Science in Computer Science, Minor in Mathematics</i>	Dec 2020 Charlotte, NC

Experience

Arria Boost <i>Data Science Intern</i>	Aug 2022 – May 2023 Remote
<ul style="list-style-type: none">Engineered a probabilistic machine learning model for NCAA Division I soccer team rankings, achieving predictive accuracy for match outcomes above the professional soccer baseline by 5%.Successfully incorporated direct modeling of match draws and tournament projections, demonstrating a strong correlation with expert rankings and achieving an 83.3% accuracy rate in men's team field predictions.Feature Engineering, Statistical Machine Learning Modeling, Data Visualization and Pipeline Automation.	
Duke Data Plus <i>Data Science/Data Engineering Intern</i>	May 2022 – Aug 2022 Remote
<ul style="list-style-type: none">Analyzed 8 years of data across Data+, Code+, and CS+ programs to derive insights on student engagement and efficacy, and implemented a dashboard for visualizing participant data to aid in program impact evaluation and strategic planning.Enhanced text analysis with Hugging Face's machine learning algorithms for deeper insights from user content, and used data-informed insights to refine program offerings, initiating targeted alumni outreach and student retention strategies.	
Coolvio <i>Analytics Intern</i>	Aug 2020 – Aug 2021 Remote
<ul style="list-style-type: none">Spearheaded the creation of a predictive model using Python and R, which forecasted user behavior trends, aiding the product team in enhancing app features.Assisted in the development and deployment of data dashboards using Tableau, leading to improved real-time reporting and KPI tracking for various departments.Conducted A/B testing on the company's website, which resulted in a 7% increase in user engagement and a 10% rise in conversion rates.	

Projects

Model-Based Approach to Music Genre Assignment	Spring 2022
<ul style="list-style-type: none">Developed a machine learning model for classifying music genres using Spotify data, utilizing K-means and Gaussian Mixture Models for song categorization. Performance was assessed with Davies-Bouldin Index and Silhouette Score for improved genre differentiation.	
Real-Time Performance Analytics with Strava	Fall 2021
<ul style="list-style-type: none">Developed a scalable microservice using FastAPI and AWS for deploying CI/CD pipelines, analyzing and visualizing Strava athletic data.	
The Legacy of the Taliban on Female Education in Pakistan	Spring 2022
<ul style="list-style-type: none">Conducted a causal inference study on the effect of Taliban control on female education in Pakistan using difference-in-differences analysis with Pakistan Living Standards Measurement Survey data.	
Market Harmony: Enhancing Pairs Trading with Advanced Statistical Models	Spring 2023
<ul style="list-style-type: none">Developed an innovative pairs trading strategy leveraging the Ornstein-Uhlenbeck process for optimal entry and exit thresholds, coupled with K-means clustering for pair selection.	

Technical Skills and Interests

Languages: Swift, R, Python (Pandas, NumPy, NLTK, Gensim, SciKit-Learn, TensorFlow, Altair, Dask), Git, Java, SQL, C, C++
Technologies: DataBricks, Tableau, React.js, Angular, Vue.js, Django, Flask, Ruby on Rails, iOS SDK
Interests: Automobiles, Motorcycles, Triathlon, Sports, Drones, 3D Printing, Health and Fitness