

Abdulgafar (Gaffy) Raji

☎ 765-730-7984 | ✉ rajigafar2018@gmail.com | 🔗 [linkedin.com/in/gaffy-raji](https://www.linkedin.com/in/gaffy-raji)

Education

- **Old Dominion University**
 - PhD in Computer Science, Specialization in Machine Learning (In Progress)
- **Ball State University**
 - Master of Science in Information and Communication Sciences, May 2024
- **Ashland University**
 - Master of Business Administration, Specialization in Business Analytics, Dec 2020

Research Interests

- Artificial Intelligence and Machine Learning in Healthcare technologies.
- The design of Explainable AI (XAI) and intelligent user interfaces.
- Development of conversational agents and chatbots for applications in healthcare and education.
- Data analysis for public health
- Computational Biology and Genomics.
- Applying machine learning, deep learning, and Natural Language Processing (NLP) to create user-centric systems.

Relevant Coursework & Skills

- **Coursework:** Statistical Methods for Data Science, Data Mining & Machine Learning, Deep Learning, NLP, Predictive Modeling Optimization Methods, Business Intelligence, Data Analytics, Data Visualization, Human Factors, Research Methodologies.
- **Skills:** Data Analysis, Data Mining, Python, R, PostgreSQL, Deep learning frameworks (TensorFlow, Keras), Machine Learning algorithms & Deployment, Tableau.
- **Tools:** GitHub, Google Cloud, Jupyter, HPC, Linux CLI, Firebase.

Certifications & Professional Organizations

- **Certifications:** Python for Absolute Beginners (Udemy), Working with Large Language Models in Python (Udemy), Machine Learning with Python (FreeCodeCamp - In Progress), GenAI concepts, AWS Certified Cloud AI Practitioner (In-progress), Google Cloud Big Data and Machine Learning Fundamentals (Coursera - In progress), Mathematics for Machine Learning and Data Science (Coursera - In progress), Machine Learning Engineering for Production (Coursera - In progress).
- **Professional Organizations:** Association of Data Scientists, International Society for Data Science and Analytics, National Society of Black Engineers, Delta Mu Delta.

Experience

- **Graduate Research Project Analyst – Old Dominion University** — August 2024 - Present

- Developed data pipelines in Python and R for preprocessing and analysis of RNA and ATAC-Seq datasets.
 - Identified ATAC-seq datasets and analyzed chromatin accessibility using MACS2 and HOMER to uncover open chromatin regions and enriched transcription factor motifs.
 - Applied machine learning and statistical modeling, and optimization techniques to identify gene expression patterns and uncover epigenetic mechanisms involving RunX1 and Myh9.
 - Explored regulatory relationships between genes using statistical and machine learning models; findings contribute to knowledge extraction in functional genomics.
 - Collaborated on NIH-funded projects to derive data-driven insights in functional genomic data, including modeling trade-offs in resource utilization across gene expression datasets.
 - Designed and tested prototype models for optimizing feature selection and hyperparameter tuning in gene expression prediction tasks.
- **Data Research Assistant – Ball State University** — August 2023 – May 2024
 - Implemented advanced data collection strategies by optimizing the efficiency of the EQ Web Sort database.
 - Managed the EQ Web Sort Database on Google Firebase, ensuring data accessibility and effectiveness.
 - Conducted in-depth research analysis of the team’s database using Python and SQL to produce actionable insights for educational improvement.
 - Facilitated an increased understanding of the EQ Web Sort Database for 200+ educational researchers through effective communication.
 - **Junior Data Analyst – Trouvere** — June 2021 – March 2022
 - Led a diverse cross-functional team in designing and optimizing database systems to support data-driven decision-making.
 - Improved customer outreach by achieving a 50% increase in data efficiency through the implementation of Python data-cleaning techniques.
 - Collaborated with IT developers to streamline database management through the enhancement of SQL databases.
 - Utilized Python for advanced data analysis to enhance the overall analytical performance.

Research & Projects

- **Multiple Instance Learning for Anomaly Detection**
 - Developed a hybrid machine learning framework that integrated Multiple Instance Learning (MIL) with Anomaly Detection techniques (Local Outlier Factors and Autoencoders).
 - ****Report:**** MILSTROUD Report (Attached in Writing Sample)
- **App Prototype for User-Centered Design**
 - Collaborated in a group to develop a prototype app focused on user design principles and experience.
 - Utilized user-centered design methodologies to create a functional prototype that addressed specific user needs and pain points.
 - <https://docs.google.com/document/d/1Jk-DCrPvx1RRMb3LC6XeDPpGS7Wh5eIDThSs4xPD6nI/edit?tab=t.0>
Prototype App Document

Leadership

- **President, African Students' Association (ASA) — 2023/2024**

- Led collaborations with other student organizations to foster better involvement within the Ball State Community.
- Supervised the annual Afro Gala event; the goal was to sensitize the Ball State Community about African Heritage.
- Presided over body meetings, which were held bi-weekly and discussed monthly events.
- Served as a liaison between the African Students' Association and Ball State University.