Niyem M. Bawana

Tel: 813-327-2419 | bawana@gatech.edu | linkedin.com/in/bawana2020 | https://niyem.github.io/

Education

Georgia Institute of Technology
PhD in Electrical Engineering **2021–2026**

- Research Interest 1: Deep Learning, Computer Vision, Natural Language Processing.
- Research Interest 2: Data Science, Data Analytics and Computational Imaging.

Summary

Aspiring data scientist with a strong foundation in problem solving, data analysis and machine learning. Seeking an internship or Co-Op opportunity to apply my technical skills and gain practical experience in data science.

Skills

- Proficient in designing and implementing machine learning algorithms and models, including supervised and unsupervised learning, and deep learning.
- Ability to design, build, and maintain business reporting and dashboards using Tableau, ensuring data integrity and accuracy.
- Data mining and statistical modeling (e.g., regression modeling, clustering techniques, decision trees, etc.).
- Strong skills in data exploration, cleaning, feature engineering, and data visualization techniques.
- Strong skills and experience in Python, SQL, PySpark, and PyTorch framework.
- Experience with Version Control (Git) and Utilization of Linux OS (Ubuntu).
- Excellent organizational skills, and ability to work independently and as a team member.
- Strong verbal and written communication skills.

Work Experience

SOS Energy Togo **2016-2017**
Applied Scientist

- Conducted experimental data collection and analysis for different stove types.
- Performed efficiency analysis for various stove designs.
- Provided insights into stove efficiency, aiding in the development of sustainable cooking solutions.

Solar Thermal Energy Research Group, Stellenbosch University **2015**
Intern

- Engaged in data collection and analysis for solar thermal energy projects.
- Conducted experimental research on the performance and efficiency of solar thermal systems.
- Performed efficiency analysis using statistical modeling techniques.
- Provided insights into the optimization of solar thermal systems through data-driven approaches.

Department of Education **2010-2015**
Physics Instructor

- Developed and delivered physics curriculum for high school students.
- Conducted experimental data analysis for physics lab sessions, enhancing students' understanding of scientific concepts.
- Performed efficiency analysis on educational techniques to improve student learning outcomes.
- Provided insights into curriculum development and instructional strategies based on data analysis and educational research.

Selected Projects

Enhancing Carbon Fiber Nondestructive Evaluation via THz Imaging and AI **Georgia Tech, Atlanta**
Research Assistant *August 2021-Present*

- Conducted research on applying machine learning algorithms to nondestructive evaluation techniques.
- Analyzed terahertz time-domain spectroscopy data to detect defects in carbon fiber composites.
- Achieved significant improvements in accuracy, contributing to the advancement of nondestructive evaluation techniques for carbon fiber materials.

Vehicle Image Classification on Unbalanced Dataset, Group Project **Georgia Tech, Atlanta**
Machine Learning Course *Spring 2023*

- Participated in a group project on vehicle image classification using an unbalanced dataset during a Machine Learning course at Georgia Tech.
- Contributed to data cleaning, exploration, and analysis of unbalanced vehicle data.
- Collaborated with classmates to develop and train a neural network, achieving a remarkable 98% accuracy in classifying vehicles.
- Successfully addressed the challenges posed by an unbalanced dataset, demonstrating strong teamwork and technical skills in machine learning.

Interactive Visualization of Chicago Bike-Share System with Divvy Data, Group Project **Georgia Tech, Atlanta**
Data Visualization and Analytics Course *Spring 2023*

- Engaged in a group project focused on creating interactive visualizations of parking tickets in New York City during a Data Visualization and Analytics course at Georgia Tech.
- Developed an interactive data visualization map using specialized tools for data visualization.
- Presented insightful visualizations that provided valuable information for stakeholders and investors in the bike-share business.
- Received positive feedback for delivering actionable insights through interactive data visualization, demonstrating proficiency in data analytics and communication skills.

Courses & Certifications

- Machine Learning Coursework
- Data visualization & Analytics Coursework
- Capstone: Retrieving, Processing, and Visualizing Data with Python
- Introduction to Business Analytics Certificate – Coursera
- Foundations: Data, Data, Everywhere certificate – Coursera
- Supervised Machine Learning: Regression and Classification certificate – Coursera
- Neural Networks and Deep Learning certificate – Coursera
- Unsupervised Learning, Recommenders, Reinforcement Learning certificate – Coursera
- Advanced Learning Algorithms certificate – Coursera
- Structuring Machine Learning Projects certificate – Coursera
- Python Data Structures certificate – Coursera

Awards

- **Fulbright Scholarship:** U.S. Department of State, 2017–2019. Prestigious scholarship awarded for academic excellence and international exchange.
- **Pafroid Scholarship:** European Union funded fellowship, 2015. Merit-based scholarship recognizing innovative ideas in the field of science and engineering for developing countries. I spent a year at Stellenbosh University's Department of Mechanical Engineering.
- **Global Achievement Awards**, University of South Florida, Tampa, 2018.