Yves Marie Ishimwe Kirunga

Ph: +250780375923 | Email: ishimwe1yves@yahoo.com | LinkedIn: https://www.linkedin.com/in/yves1marie/ | Github: https://github.com/Yves-Ishimwe

Summary

As a data scientist with a master's degree in Electrical and Computer Engineering, specializing in Data Science and Applied Machine Learning, I bring hands-on experience from a four-month internship with Kreativstorm, a Germany-based company. I led impactful projects, including the "Solar Irradiance Analysis" for Africa Improve Food and participated in a Kaggle challenge on "Credit Card Customer Segmentation." Proficient in Python, MATLAB, Excel, IBM SPSS, AWS, and Streamlit, my skill set extends to web development using Python.

Educational Background

Master of Science in Electrical and Computer Engineering July 2022 – December 2023
Carnegie Mellon University Africa
Specialization: Data Science and Applied Machine Learning

Bachelor of Science in Electrical Power Engineering October 2017 – February 2022
University of Rwanda | College of Science and Technology
Specialization: Energy systems

Skills

- **Programming:** Python, R, Linux
- **Data processing/wrangling:** SQL, pandas, NumPy
- **Data Visualization**: plotly, matplotlib, seaborn, altair
- **Machine Learning**: Scikit-Learn
- **Deep Learning**: Tensorflow
- **Web development**: Flask, HTML, CSS
- **Model deployment**: streamlit, Ocean, AWS
- **Additional skills**: Excel, MATLAB, IBM SPSS, Github

Experience

Data Analyst May 2023 – August 2023
Kreativstorm

- Assisting in the development and implementation of data analyses, data collection systems, and other strategies that optimize statistical efficiency and quality
- Collaborating with various teams to understand and meet data analysis needs
- Analysing and interpreting complex data sets, and presenting results to the team
- Keeping all data analysis documentation up to date

Student Admin Support May 2023 – September 2023
Carnegie Mellon University Africa

- Collaborating with the supervisor, contributing to the planning and execution of events, ensuring logistical details are well coordinated, and assisting with any administrative requirements
- Providing technical assistance to students, staff, and faculty members, offering guidance on technical tools or systems, and facilitating a smooth technological experience within the administrative context.

Electrical Service designer Intern February 2022 – August 2022
Smart Power Ltd

- Detected and rectified malfunctioning systems by utilizing test equipment to identify and eliminate bugs
- Developed panel designs for Protection, Control, and Measurement in Low Voltage and Medium Voltage applications.
- Supported testing, conducted report writing, and presented findings to technical and non-technical staff/customers.
- Engineered and implemented lightning protection systems, promoting enhanced communication and teamwork.

Networking Engineer Intern May 2019 – October 2019
Epyslon consulting Ltd

- Managed the comprehensive design, installation, and administration of the organization's local area network, wide areanetwork, network segments, and internet systems.
- Executed maintenance window changes for multiple locations and skillfully troubleshooted routing and switching issues.
- Executed fire alarm system design by drafting schematic drawings, specifying necessary equipment, and overseeingtheir installation.
- Coordinated the design of surveillance systems, managing both the installation and programming of vital systemcomponents.

Projects

Solar Irradiance Analysis
Africa Improved food project

In this Africa Improved Food project, we focused on analysing solar irradiance to determine its suitability for a solar power plant. To achieve this, I collected diverse datasets, applied mathematical and statistical methods to estimate solar radiation components, and presented results visually. I investigated anomalies, such as the lowest observed radiation in June, conducting in-depth research to identify contributing factors for a comprehensive solar energy potential assessment.

Credit card customer Customer Segmentation and Classification using Machine Learning algorithm
Kaggle challenge project

I spearheaded a Kaggle challenge focusing on classifying customers according to their credit card information, providing a valuable tool for financial institutions, including banks, for customer segmentation. Following the challenge, I developed an algorithm accessible through a website, involving data exploration, exploratory data analysis, dimensionality reduction, unsupervised and supervised model building, data labelling, and model deployment. The results showcase a remarkable 98% accuracy, demonstrating the efficient identification of customer segments.

Classification of Multi-label 12 Lead Electrocardiogram readings using deep neural network
Carnegie Mellon University project

This project employs machine learning and deep learning techniques for the multi-class classification of Electrocardiogram (ECG) readings, enhancing rapid and accurate diagnoses globally. It addresses the shortage of ECG interpreter expertise in health centers, contributing to modern healthcare efficiency. Originally a PhysioNet 2020 challenge, the winner achieved a 67% accuracy in classifying ECG 12 reads. My objective was to surpass this benchmark, and indeed, my deep learning algorithm achieved an outstanding 71% accuracy, marking a significant advancement in ECG signal classification

Certificates

- 100 Days of Code: The complete python pro Bootcamp for 2023 through Udemy
- Udemy certificate of python for Machine Learning and Data Science Masterclass
- IBM professional Data Science certificate by University of Michigan offered through coursera