


# LOUIS AGYEKUM

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https://louis-agyekum.github.io 

## >> DATA SCIENCE | MACHINE LEARNING

**MOTIVATION** *I am passionate about [solving business problems](#) using Data Science & Machine Learning. I systematically & creatively use my skillset to [add tangible value](#) to the team, the business, and the end-user. I am constantly learning, and always looking to improve.*

**SKILLS & TOOLS**

**Programming:** Python (Base, Pandas, Numpy, Matplotlib, Scikit-Learn, Keras), SQL, R, STATA

**Machine Learning:** Linear Regression, Logistic Regression, Decision Trees, Random Forest, KNN, k-means, PCA, Association Rule Learning, Causal Impact Analysis

**Other:** Statistics, Github, Data Visualisation, MS Office, Tableau, Jupyter Notebook, AWS, Microsoft Excel

## EXPERIENCE **Statistics and Programming Instructor - Trent University**

SEPTEMBER 2021 - PRESENT

- Developed and delivered curriculum for undergraduate and graduate level courses in [Python programming and introductory probability](#).
- Evaluated and provided feedback on student performance through quizzes, exams, and assignments.
- Collaborated with other departments to [integrate Python](#) into other fields of study.
- Participated with professional development opportunities to stay current with trends and [technologies in Python programming](#).
- Mentored and advised students on academic and [career opportunities](#).
- Taught various Python Libraries, frameworks and technologies such as [NumPy](#), [Pandas](#), [Matplotlib](#), [Scikit-learn](#), [TensorFlow](#), [Keras](#), etc.

## **Junior Analyst - Comet Real Estate Limited**

JULY 2020 - AUGUST 2021

- Used [SQL & Tableau](#) to automate the extraction of real estate data, and create a dynamic weekly report that helped senior leadership [understand and investigate trends over time](#), and [diagnose potential issues in the real estate market](#).


## PROJECTS **Grocery Delivery Optimization**

- Created & applied a [Genetic Algorithm in Python](#) to search out a near-optimal route across 10 addresses. This led to estimated [savings of up to 50%](#) in both delivery time and fuel consumption over a route based upon transaction order alone. This approach could be utilised across many industries as a way to find more optimal solutions.


## **"You Are What You Eat" Customer Segmentation**

- Used [k-means clustering](#) on grocery transaction data to split out customers into distinct "shopper types" that could be used to better understand customers over time, and to more accurately target customers with relevant content & promotions

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**EDUCATION**

**BA Statistics & Economics**  
2016 - 2020 - University of Ghana, Legon

**MA SUSTAINABILITY STUDIES**  
2021-2023 - Trent University, Peterborough.

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**COURSES  
& CERTS**

## DATA SCIENCE INFINITY

**Actionable Learnings:** Extracting & manipulating data using SQL. Application of statistical concepts such as hypothesis tests for measuring the effect of AB Tests. Utilising Github for version control, and collaboration. Using Python for data analysis, manipulation & visualization. Applying data preparation steps for ML including missing values, categorical variable encoding, outliers, feature scaling, feature selection & model validation. Applying Machine Learning algorithms for regression, classification, clustering, association rule learning, and causal impact analysis for measuring the impact of an event over time. Machine Learning pipelines to streamline the ML pre-processing & modelling phase. Deployment of a ML pipeline onto a live website using Flask & Heroku. Turning business problems into Data Science solutions.

## APPLIED DATA SCIENCE LAB (WORLDQUANT UNIVERSITY)

**Actionable Learnings:** Through this data science certification, I have gained valuable experience in end-to-end data science projects, including data access and preparation techniques, data cleaning and exploration, building machine learning models for supervised and unsupervised tasks, and creating effective visualizations to explain data characteristics and model predictions to non-technical audiences. The hands-on experience equipped me with the necessary skills to access data from various sources, prepare data for analysis, build and evaluate machine learning models, and communicate findings to non-technical stakeholders.

## MICROSOFT EXCEL - FROM BEGINNER TO ADVANCED (UDEMY)

**Actionable Learnings:** Through my Microsoft Excel certification, I have comprehensive knowledge in Excel, from beginner to advanced to advanced level. I am proficient in Excel's basic functions and formulas, as well as advanced features such as PivotTables, macros, and data visualization. I have gained the ability to use Excel for data analysis, including data manipulation and cleaning, and data visualization. I am also able to create and manage complex spreadsheets and workbooks including working with large data sets. This certification has given me the confidence to use Excel to support data-driven decision making and improve efficiency in any organization.