# Bright Aboh

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## Skills

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|---|---|
| **Python(Pandas, Numpy, Matplotlib, Sci-kit learn, Jupyter-notebook)** | 5+ yrs |
| **Machine Learning / Deep Learning** | 4+ yrs. |
| **SQL** | 3+ yrs. |
| **Linux/Mac OS** | 5+ yrs. |
| **Scala** | 4+ yrs. |
| **R** | 4+ yrs. |
| **ML-flow** | 2+ yrs. |

## Software

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|---|---|
| **Cloud computing(AWS)** | 2+ yrs. |
| **Cloud computing(Google Earth Engine)** | 2+ yrs. |
| **Version control(git)** | 3+ yrs. |

## Language

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|---|---|
| **English** | L1 |
| **French** | C2 |

# About me

I am a passionate and results-driven data scientist with a strong background in predictive modeling, deep learning, and machine learning. My journey in the world of data began with a fascination for uncovering insights hidden within complex datasets, and it has evolved into a commitment to leveraging cutting-edge technologies to solve real-world problems.

# Work experience

**Machine Learning Expert - International Consultant**　　**08/2023 - Present**
**ACCIONA SA**
**Remote**

Detailed achievements:

- Applied PyTorch for training deep learning models dedicated to boundary delineation and crop type classification, achieving outstanding results on all metrics measured.
- Conducted comprehensive automation of data processing and preparation procedures, optimizing efficiency by reducing repetitive processing time by 70%.
- Deployed an AI-powered web application.
- Mentoring junior data scientists from National Institute of Statistics Rwanda, focusing on machine learning design, pipeline development, and code documentation.

**Technical Data analyst**　　**05/2023 - 12/2023**
**Affiliated Distributors**
**Wayne**

Detailed achievements:

- Leveraged python for advanced e-commerce product analytics and process automation, showcasing versatility in data-driven decision-making and optimization strategies for A/B testing.
- Contributed to decision-making processes by presenting clear and data-driven assessments, empowering the Digital Content Manager to make informed choices regarding AI product adoption.
- Collaborated with the Digital Content Manager to devise algorithms automating e-commerce data quality procedures, leading to an impressive 95% decrease in manual checks.
- Proficient in utilizing SQL for efficient retrieval and ingestion of large datasets, demonstrating a robust foundation in database management.

## Interests

- Statistical modelling
- Image recognition
- Regression analysis
- Predictive modelling
- Data manipulation/data analysis
- Dashboard development
- Effective documentation and communication
- Research

## Education

**08/2017 - 02/2019**

**Mathematical Sciences - Big Data & Financial Mathematics (M.Sc.)**
African Institute for Mathematical Sciences

**09/2018 - 10/2018**

**Short courses on applied mathematics: Data science and networks**
Technische Universität Chemnitz

**09/2011 - 07/2015**

**Financial Mathematics (B.Sc.)**

University for Development Studies

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**Data Scientist**      **09/2021 - 04/2023**
**Philip Morris International**
**Remote**

Detailed achievements:

- Innovatively designed algorithms to identify crop types from Synthetic Aperture Radar (SAR) images, showcasing expertise in image analysis and pattern recognition.
- Proficient in model training using Amazon SageMaker and ML flow, leveraging cloud-based solutions for scalable and efficient machine learning/deep learning workflows.
- Engineered a state-of-the-art deep learning segmentation model, achieving an impressive 85% precision in delineating land parcels.
- Conducted comprehensive code review and documentation.

**Data science consultant**      **04/2021 - 08/2021**
**Ghana Statistical Services**
**Ghana**

Detailed achievements:

- Mentored and trained a cohort of 6 Data Science Trainees from the Ghana Statistical Service, providing hands-on guidance in dashboard development using Python and plotly Dash.
- Led comprehensive data pre-processing initiatives, ensuring the integrity and quality of datasets for accurate and impactful analysis.
- Developed and deployed an interactive dashboard for real-time monitoring of Ghana's Population and Housing Census, contributing to data-driven decision-making.

**Research fellow**      **11/2020 - 04/2021**
**UK-Research and Innovation/AIMS**
**Rwanda**

Detailed achievements:

- Developed a comprehensive methodological framework for modeling air pollution in Sub-Saharan African cities, laying the foundation for robust and accurate analyses in environmental research.
- Fostered collaborative efforts by conducting regular meetings with professionals from Imperial College and Universities Space Research Association. These engagements focused on the exchange of knowledge and in- sights related to data analytics and advanced methodologies, contributing to a dynamic and informed research environment.
- Evaluated the potential for merging ground-level and satellite sensing technologies with data analytics and AI methods to enhance data-driven decision-making

**Data scientist (Machine learning researcher)**                     06/2019 - 09/2020
**Rwanda Environment Management Authority**
**Rwanda**

Detailed achievements:

- Demonstrated proficiency in Google Earth Engine mapping and implementation of machine learning models on satellite imagery, including Landsat 7, 8, and MODIS. Implemented classification models such as SVM, CART, and Decision Trees for precise land use and change detection.

- Analyzed air quality data from stationed RAMPs (Real-time Air Quality Monitoring Platforms) to provide valuable health recommendations, showcasing a holistic approach to data-driven insights.

- Spearheaded a team of 12 members in Rwanda's national satellite data collection initiative, spanning seven governmental departments. Achieved a remarkable 75% reduction in data collection time for Land Use assessments.

- Successfully established and managed a PostgreSQL database, showcasing strong database management skills.

## Publications

- B. Aboh. Satellite imagery analysis for land use, land use change and forestry: A pilot study in kigali, rwanda. 2020

## Presentations

**Crop type clustering using NDVI**

*Data Science Conference, Europe*                                September,2022
**Location:** Belgrade/Virtual

**Satellite Imagery Analysis for Land Use, Land Use Change and Forestry : A Pilot Study in Rwanda**

*NeurIPS 2020 Workshop: Tackling Climate Change with Machine Learning*    June,2020
**Location:** Virtual

**Satellite Imagery Analysis for Land Use, Land Use Change and Forestry : A Pilot Study in Rwanda**

*ACM SIGCAS Conference on Computing and Sustainable Societies*    September,2020
**Location:** Virtual