

# Kiprono Elijah Koech | Résumé

🏠 Nairobi, Kenya

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## Summary

Highly analytical, results-oriented data scientist and statistician with a strong foundation in Data Science, Python programming and SQL database management. Grounded researcher dedicated to solving real-world challenges through advanced data analysis and predictive modeling.

## Key Skills

### Areas of Expertise

Applied Statistics   Machine Learning   Deep Learning   Computer Vision   Data Mining   Data Visualization  
Reproducible Research   Business Intelligence and Analytics   Applied Mathematics   Database Management

### Tools and Technologies

Python   SQL   Git Version Control   R Language   LaTeX   TensorFlow and Keras   AWS   HTML and CSS  
Tableau   Looker and LookML   Microsoft Office Suite   Docker   SPSS   Linux

### Soft skills

Dependable   Very quick and eager to learn   Thriving in solving complex tasks   Excellent Communicator

## Work Experience

### Data Intelligence Analyst, Sun King Limited

Nairobi, Kenya

*A brief: Analyzing data to drive sales and improve the collection of follow-on revenues.*

**January 2023 – To Date**

- Design pilots, analyze data, and make recommendations to help improve sales of our products and promote the collection of follow-on revenues on products under a loan.
- Awarded Dedicated Service Award for my stellar performance on pilot and fraud analyses.
- Recommendation on the pilot analyses helped the Company save 0.5 Million USD per month that could have been lost through fraudulent activities.

### Data Science Intern, Kenya Meteorological Department

Nairobi, Kenya

*A brief: Working on techniques to improve weather forecasting.*

**April 2022 – October 2022**

- Working on improving weather forecasting through the application of machine learning recurrent neural network models,
- Testing new parametrization schemes and,
- Optimizing data assimilation procedures for Weather Research and Forecasting (WRF) model initialization.

### Research Fellow, Science of Intelligence

Berlin, Germany

*A brief: Worked on a computer vision project at Technische Universität Berlin.*

**Feb 2021 – Aug 2021**

- Worked on action recognition problem for wildlife

### Data Assistant, PACT-Timiza

Kisii and Migori, Kenya

*A brief: Data entry, management, and analysis role involving HIV patients information.*

**Jan 2018 – Dec 2018**

- Managed HIV patients data for over 10,000 clients. This involved entering information on the paper into the I.Q care database; analyze the data to locate clients with poor adherence and recommend follow-up; and data quality checks.
- Follow-up reduced the cases of poor adherence to anti-retroviral by over 70% and be able to close cases as required. Rectified an event that almost led to the loss of 2300 data points due to system failure. The by-product of this was setting up a more robust backup pipeline.
- Worked as a Data Clerk for the first 2 months, then promoted to Data Assistant.

## Projects

1. **Fruit Detection** | *Skills: Python, TensorFlow and Keras, Computer Vision*

- In this project, Mask R-CNN and YOLOv5 are deployed in context from fruit detection on outdoor images (apples and mangoes).
  - The two models achieved on-par state-of-the-art results attaining 93% and 88% in F1 scores for mango and apple images, respectively... [more information in GitHub](#).
2. **Reviews Classification** | *Skills: Web scraping, Sklearn, machine learning algorithms*
- This project involves scraping over 200k reviews using Scrapy and classifying them as positive or negative using different Sklearn models. Also, dealing with the issue of data imbalance.
  - SVM classifier was the best in this application achieving an F1 score of 89%... [the code is in this GitHub repo](#).
3. **Crop Disease Classification** | *Skills: Python, TensorFlow and Keras, Computer Vision*
- This is a classification problem applied to Agriculture. This project was presented as a solution to a Zindi Challenge and ranked as top 15% solution...[more information in GitHub](#).

## Education

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### Stellenbosch University

Certificate: **Master's Degree in Applied Mathematics (Data Science)**

Research area: *Deep Learning/ Computer vision*

Cape Town, South Africa

*Feb 2020 – Apr 2022*

### Stellenbosch University

Certificate: **Master's Degree in Mathematical Sciences, Cum Laude**

Research area: *Machine Learning and Computer Vision*

Cape Town, South Africa

*Jan 2019 – Nov 2019*

### Jomo Kenyatta University of Agriculture and Technology

Certificate: **Bachelors Degree in Science (Statistics), First Class Honors**

Nairobi, Kenya

*Sep 2013 – Nov 2017*

## Award and Honors

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**Dedicated Service Award by SunKing** - recognition from CEO for stellar performance as Analyst.

*(Nov 2023)*

**Golden Key Award by Stellenbosch** - for being among the top 15% academic performers in the 2019 cohort.

*(2020-2022)*

**Scholarship by African Institute for Mathematical Sciences(AIMS)** - for MSc Mathematics at S.U

*(2019-2010) & (2020-2021)*

**Award for Excellence by African Institute for Mathematical Sciences(AIMS)**, for being top of the class

*(Jan 2019 - Nov 2019)*

**Vice-Chancellors Academic Award by JKUAT**, the best student in Bachelor of Science (Statistics option)

*(2014/2015, 2015/2016, and 2016/2017 academic years)*

**Contest Winner at Secondary**, Mathematics contest with 1954 contestants

*(2012)*

## Groups and Societies

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- Computer Vision and Remote Sensing Group at Technische Universität Berlin, Germany [\[1\]](#)
- Data Science Research Group at African Institute for Mathematical Sciences, South Africa [\[1\]](#)
- Golden Key International Honour Society
- Kenya National Society of Statisticians

## Hobbies and Interests

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- Volunteering and Charity work.
- Playing puzzle games like Rubik's Cube and Sudoku game.
- Reading books. Currently reading "The 12 Week Year" by Brian Maron and Michael Lennington.