

# Kiprono Elijah Koech | Résumé

🏠 Nairobi, Kenya

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## Summary

An experienced, highly analytical and results-oriented data scientist and statistician focus on being a grounded researcher in machine learning and deep learning.

Graduate of Stellenbosch University and Jomo Kenyatta University of Agriculture and Technology with a Masters Degree in Mathematical Sciences and Bachelors Degree in Statistics, respectively. Recently finish a program towards Masters Degree in Applied Mathematics at Stellenbosch University. Also worked as a Research Fellow at Technische Universität Berlin recently.

Possessing working knowledge in programming languages like Python and R with the application on Data Science fields like Predictive Modeling, Data Analytics, Computer Vision, among other areas.

## Key Skills

### Areas of Expertise

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

### Tools and Technologies

Python   SQL   Git Version Control   R (familiar)   L<sup>A</sup>T<sub>E</sub>X   TensorFlow and Keras   AWS   HTML and CSS  
Tableau   Microsoft Office Suite   Docker   SPSS

## Education

### Stellenbosch University

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

Anticipated graduation: March 2022

Research area: *Deep Learning*

Cape Town, South Africa

*Feb 2020 – Dec 2021*

### 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*

## Work Experience

### Research Fellow, Science of Intelligence

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

Berlin, Germany

*Feb 2021 – Aug 2021*

- Worked on action recognition problem

### Data Science Technical Mentor, Great Learning - Olympus

A brief: *A mentorship and tutoring role for data science students.*

(Remote) Texas, U.S.A

*Nov 2020 – Aug 2021*

- Mentored and tutored 6 students per semester taking a course in Data Science and Business Analytics at Olympus, attaining 100% successful completion of the course.

### Data Assistant, CDC-University of Maryland

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

Kisii and Migori, Kenya

*Jan 2018 – Dec 2018*

- Managed HIV patients data for over 10,000 clients. This involved entering information on the paper into the IQ 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.

## Statistician Intern, South Nyanza (SONY) Sugar Company

Migori, Kenya

*A brief: An internship working with factory data in a sugar company.*

**Jun 2017 – Dec 2017**

- Analyzed factory data to explain production trends and seasonality phenomena.
- Particularly analyzed downtime data and reported variables that are most significant in impacting the extent of downtime. Upon implementation, there was a 42% drop in downtime in 2018 compared to 2017.

## Projects

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- 1. 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.](#)
- 2. 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% F1 score for mango and apple images, respectively... [more information in GitHub.](#)
- 3. Crop Disease Classification | Skills: Python, TensorFlow and Keras, Computer Vision**
  - This is 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.](#)

## Award and Honors

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**Golden Key Award**, for being among the top 15% academic performers among the 2019 cohort.  
(2020-2022)

**African Institute for Mathematical Sciences(AIMS) Scholarship**, for MSc Mathematics at S.U  
(2019-2010)&(2020-2021)

**Award for Excellence**, African Institute for Mathematical Sciences(AIMS)  
(Jan 2019- Nov 2019)

**Vice-Chancellors Academic Award**, the best student in Bachelor of Science (Statistics option)  
(2014/2015, 2015/2016 and 2016/2017 academic years)

**First place**, Mathematics contest with 1954 contestants  
(2012)

## Groups and Societies

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- Computer Vision and Remote Sensing Group at Technische Universität Berlin, Germany [\[1\]](#) [\[2\]](#)
- Data Science Research Group at African Institute for Mathematical Sciences, South Africa [\[1\]](#)
- Golden Key International Honour Society
- Kenya National Society of Statisticians