James Mukuya Okinda

- Software Developer
- Data Scientist
- Web Developer
- Flight Operations

Personal Information

Date of birth:	27/02/1989	Gender:	Male
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Profile

I have over 10 years experience in Information Technology - software development, data science and web development with extensive experience and ability to drive strategic innovations in areas of business growth, leadership and organization effectiveness. I design and build algorithms for data analysis and visualization for both the web and stand-alone systems using statistical methods such as Logistic regression, K Nearest neighbors, SVM, PCA.

I am also licensed in Flight Operations and Dispatch with over 7 years experience in aviation. In my role I ensure implementation of safety, security, efficiency and emergency standards at all times. I take part in controlling and coordinating the daily fleet operations of the airline over total route network – International, Regional and domestic.

Professional Experience

Techpoint Systems[2014 - present] - Software Engineering

- I develop web and stand alone data analysis and visualization systems. I use Python and its libraries [pandas, numpy, scikit-learn, keras/tensorflow] for the backend and Python-Flask/django, Javascript, HTML and CSS for the front-end.
- I lead the team in development of machine learning models for data manipulation, using methods such as Linear regression, Cross validation, Logistic regression, KNN, PCA in analyzing the input data.
- I write unit test programs to ensure bug free code during development.
- I carry out research to develop and design improved data analysis processes.
- I use docker to create containers for the applications when i need to deploy on cloud or install the application on stand alone computers.
- I am a mentor to my peers and other developers.
- I train users to use developed applicaitons.

Kenya Airways [2014 - present] - Operations Control

- Analyze, decode and provide enroute meteorological information to aircrafts on ground and in-flight for safe operations.
- Establish effective communication with aircraft and ground staff using UHF, VHF, HF radios and ACARS.
- Keep sufficient flight watch and monitor flight progress using enroute charts, ACARS position reports, computerized flight plans and GUI software
- Controll and co-coordinate the daily fleet operations of the Airline over the network of over 40 international destinations.
- Make final decisions based on the best compromise solution taking accountability of all pertinent factors.
- Ensure implementation of safety, security and emergency standards at all times.
- Maintain and compile correct operational data.
- I Keep in touch with other departments to ensure information is available across the business

Pan African Airways [2013 - 2013] - Operations Management

- Overall responsibility for the running of the operational control center.
- Oversee all major operational decisions and devise solutions to problems that arise.
- Make sure that the aircraft and crew meet the safety standards for flight operations.
- Advise other departments of operational issues that may affect the airline's performance.
- Responsible for the day-to-day budget and resource allocation.
- Liaise with service providers (fuellers, ground handling companies, ATC, airport authorities etc).
- Ensure that each flight has the right number of suitable, qualified crew members.
- Ensure that every flight has the right type of aircraft.
- Forward planning to try to reduce flight disruptions and its possible impact.

Educational background

Sep 2019 - 2021	• **Kenya Methodist University** • Bsc. Computer Information Systems
Aug 2019	• **Rochester Institute of Technology** • International Project Management
Nov 2017 - Jun 2018	• **Massachusetts Institute of Technology** • Computation and programming in Python (computer science)
Apr 2018 - May 2018	• **Havard University (through EdX)** • Data science in R
Apr 2017	• **Axelos People Cert** • ITIL Foundation
Feb 2012 - Sep 2012	• **East African School of Aviation** • Diploma Flight Operation and Dispatch
Mar 2008 - Nov 2011	• **East African School of Aviation** • Diploma Telecommunication Engrineering

Skills

Personal Qualities

- Motivation ★★★★★
- Productivity ★★★★★
- Passion ★★★★★
- Responsibility ★★★★★
- Leadership ★★★★☆

Software Development

- Python ★★★★★
- Javascript ★★★★☆
- Node JS ★★☆☆☆

Web Development

- HTML5/CSS3 ★★★★☆
- Javascript ★★★★☆
- Python-Flask ★★★★☆
- VueJS ★★☆☆☆
- PWAs ★★☆☆☆
- NodeJS ★★☆☆☆

Databases

- MySQL ★★★★☆
- SQL ★★★★☆
- NoSQL ★★★☆☆
- MongoDB ★★☆☆☆

Systems and Networking

- Git ★★★☆☆
- Docker ★★★☆☆
- Kubernets ★★★☆☆
- uWSGI ★★★☆☆
- Nginx ★★☆☆☆

Data science

- Neural Networks ★★★★☆
- Scikit learn ★★★★☆
- Pandas ★★★★☆
- Py-spark ★★★☆☆
- Big Data ★★★☆☆

IT Methodologies

- Agile
- Test Driven Development
- Feature Driven Development
- Behavior Driven Development
- Continuous Integration/Development

Languages

- English - Professional
- Swahili - Native

Aviation (General)

- Safety ★★★★★
- Communication ★★★★★
- Planning ★★★★★
- Ops Procedures ★★★★★
- Emergency Response ★★★★★
- Coordination ★★★★★

Aviation (Specifics)

- Airlaw ★★★★☆
- Flight Planning ★★★★★
- Operational Procedures ★★★★★
- Aircraft Knowledge ★★★★☆
- Navigation ★★★★☆
- Aviation English ★★★★★
- Human Performance ★★★★☆
- Meteorology ★★★★★

2018 Tensor Fuel Efficiency Tool

- Analysis of the large amount of data available in flight data recorders and/or ACARS to assess flights' efficiency.
- Carbon Emmissions monitoring and reporting- EU ETS & CORSIA
- Fuel saving initiatives
- Detailed interactive visualizations
- Access to raw data
- Planned vs actual fuel consumption
- Flight Crew debriefs

2019 Neural Schedule Optimization Tool

- Plans for efficient operations and maximum returns by avoiding random assignment of tasks though the provision of actual state of assests i.e.
- Cumulative costs on each equipment
- Next allocated cost
- Recommended route-airframe pairs proposal
- Immediate and future savings reports
- +72hrs Operational Pre-plan analysis

2019 Centralized Operations Tool

- Enables employees to obtain required information across your network for efficiency and increased productivity such as:-
- Airport data such as runways available with their distances, fuel availability, operating hours/days
- Enroute NOTAMS affecting operations
- Schedule change messages
- Delay alerts and reports
- Passenger loads per route
- Equipment serviceability and performance limitations
- Flight cycle/ flight hours limitations

Embedding flask with bokeh plotting library in the stand-alone or web app

- I wrote an algorithim that shows other developers how they can embed their graphical analysis tools in flask to serve as web or stand alone applications
- https://github.com/jamesmukuya/flask-embed-web
- https://github.com/jamesmukuya/flask-embed-bokeh

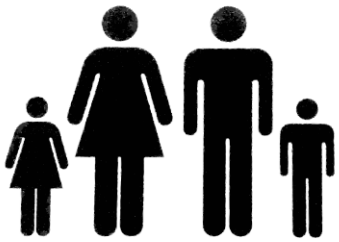
Hobbies

Video games

Flying

Exercise

Programming



Family