KIPNGENO KIRUI

📱 +254 790 273 412 • ✉ kipngenokirui1993@gmail.com

LinkedIn: https://www.linkedin.com/in/kipngeno-kirui/
GitHub: https://www.github.com/kirui93

Education

1) **Masters in Mathematical Sciences**   **African Institute for Mathematical Sciences (AIMS)**
Mbour, Senegal   *2017 – 2019*
Major in Data Science and Financial Mathematics

2) **BSc in Mathematics and Economics with IT**   **Maseno University**
Kisumu, Kenya   *2012 – 2016*
Major in Pure and Applied Mathematics

3) **Kenya Certificate of Secondary Education (KCSE)**   **Kiplelji Secondary School**
Bomet, Kenya   *2008 – 2011*

Professional Experience

Predictive Analytical Resources Limited (PARL)   **Nairobi, Kenya**
Researcher and Data Scientist   *January 2021 – Present*

- Tasked to ensure that the Data Science and Consultancy department is formed and working in order to support clients with data-related needs.
- Facilitating the process of survey analysis and questionnaire design for clients using IBM SPSS and PS QUESTIO PRO.
- Conducting research and interviews to our clients to know their needs and offer technical support to existing clients through emails and phone calls.
- Enhancing data collection procedures to include information that is necessary for building analytical systems.
- Processing, cleaning and verifying data integrity for various data sets.
- Selecting features, building and optimizing classifiers using machine learning algorithms.
- Performing data management and analysis and building machine learning models to various clients based on their data.
- Presenting information using data visualization techniques in Python, IBM SPSS and IBM Cognos Analytics.
- Collaborating with IT and training teams in conducting company's projects as directed by the Management.

Technical University of Chemnitz (TU-Chemnitz)   **Chemnitz, Germany**
Research Assistant   *April 2019 – December 2020*

- Researched on multistage stochastic optimization and made its extension to higher dimensions.
- Programmed, documented and published a Julia package (ScenTrees.jl: https://github.com/kirui93/ScenTrees.jl) to generate scenario trees and scenario lattices for approximating stochastic processes.
- Gathered project data on autonomous cars, in collaboration with other Faculties, with defined variables to explain factors that determine comfort on autonomous cars.
- Developed, maintained and secured a PostgreSQL database system to store the collected data.
- Ensured that the allocated team performed data cleaning on the data to the required standard for analysis.
- Performed an Exploratory Data Analysis and data visualizations to explain factors that determine comfort in autonomous cars on the dataset.
- Generated machine learning models, with overall accuracy of 92.24%, to predict the comfort of an individual using Python on the autonomous car dataset.
- Documented and presented the results of the analysis to the stakeholders to help in their decision making process.

Technical University of Chemnitz (TU-Chemnitz) **Chemnitz, Germany**
Master Thesis Research Internship *May 2018 – Oct 2018*

- o Extended the research on portfolio optimization problems by entangling with different risk measures including Value-at-Risk (VaR), Average Value-at-Risk (AVaR) and Entropic Value-at-Risk (EVaR) and made a comparison of their performance with variance risk used in the Markowitz portfolio problem.

- o Collected real-time stock data from Yahoo Finance using Python and used it to model and compare the portfolio problems with the Markowitz portfolio.

- o Participated in our weekly research meetings with the Supervisor and the team, where I made presentations about the research progress made and also the results obtained.

- o Authored a Master Thesis on the research results as part of the requirement for the Internship and the Masters program.

AON-MINET Insurance Companies **Nairobi, Kenya**
Data Scientist *March 2017 – Aug 2017*

- o Arranged and entered data in client's forms into the company's database creating order and cleanliness in the department.

- o Analyzed the data on claims using IBM SPSS Statistics and Python and provided weekly presentations of the analysis results during the departmental meetings.

- o Guided a team of ten new colleagues on the interaction with the database and also on data analysis techniques.

Professional Certifications

IBM Machine Learning	IBM	In Progress
Machine Learning	SimpliLearn	In Progress
Business Analysis	Udemy	In Progress
Introduction to Cybersecurity	Simplilearn	August 2021
DeepLearning.AI TensorFlow Developer	DeepLearning.AI	July 2021
Introduction to Research Ethics	TREEE	July 2021
IBM Data Analyst	IBM	May 2021
IBM Certified Specialist - IBM SPSS Statistics Level 1 v2	IBM	March 2021
IBM Data Scientist	IBM	November 2020
Microsoft Data Scientist	MIcrosoft	December 2019

Technical Skills

Python/Scikit-Learn	Microsoft Office	MATLAB/Octave
R/R Studio	Data Visualization and Dashboarding	Data Mining
Julia	Machine Learning	Quantitative Analysis
Hadoop	Deep Learning	Unix Scripting/Linux Command Line
Apache Spark	Natural Language Processing	Cloud Computing
IBM SPSS Statistics	Exploratory Data Analysis	Data Cleaning
SAS	Database design	Data Warehouse/ETL
SQL	Mathematical Modeling	Data Collection

References

Available upon request.