ZAKARI MUMUNI

HONOLULU, HI

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Profile

Highly experienced Data Scientist adept at collecting, analyzing, and interpreting large datasets, developing new forecasting models, and performing data management tasks. Possessing an extensive analytical skills, strong attention to detail, and a significant ability to work in team environments.

Skills

- **Programming: Python, R, Spark**
- **Machine Learning: TensorFlow, Pytorch, and H20**
- **Visualization: Leaflet, Tableau, and Power BI**
- **Statistical: SAS/STATA/SPSS**
- **Database: SQL Server/mysql**
- **GIS: ArcGIS Desktop/QGIS**

Work History

OahuMPO, HI (Senior Transportation Planner) **2/2020- to date**

- Defined KPIs and designed dashboards that enable better decision-making.
- Queried multiple data repositories to support analysis of transportation data.
- Created, developed, and maintained GIS databases.
- Sparsed, normalized, and mapped unstructured location data.
- Automated processes for data cleaning, transformation, and analysis.
- Analyzed disparate data sources, covering socio-economic and environmental layers.
- Analyzed, interpreted, and presented analysis results to stakeholders.

East-West Gateway CoG, St. Louis, MO (Data Analyst) **3/2017 - 1/2020**

I applied GIS to extract and join various datasets for Machine Learning routines:

- Forecasted freeway traffic congestion using MLP, LSTM, SARIMA, and Markov Switching models.
- Identified congestion CLUSTER using Buffer Time, Planning Time, Speed, and Time.
- Predicted impact of land use on traffic congestion using LOGISTIC regression.
- Predicted freeway congestion using Speed, Travel Time, and Planning Times with DECISION TREES.
- Reduced highly correlated variables to less correlated ones using PCA.
- Assessed the impact of work zones on traffic congestion using Bayesian Structural Time Series model.

Kesse-Tagoe & Assoc., Accra-Ghana (Senior Data Analyst) **9/2000 – 8/2013**

I collected and Analyzed multiple ML models in Banking and Telecom industries:

- Classified bank customers with K-means CLUSTER analysis based on demographics and transactions data.
- Built predictive models using binary LOGISTIC regression for scoring credit applications, and removed redundant variables from datasets using PCA.
- Predicted real-time bank card fraud detection using MLP and RBF.
- Used K-means CLUSTER analysis to segment telecom customers based on user call characteristics.
- Forecasted short-term customer subscribership, churn, device sales, and dropped-call rates using MultiLayer Perceptron, Deep Learning, Seasonal AutoRegressive Integrated Moving Average (SARIMA) models.
- Modeled "time to churn" using COX regression based on years with employer, years at current address, household size, age, marital status, retiree, education, gender, and customer category.

Education

- MA Urban Studies. Portland State University, Portland (2016).
- MA Urban Planning. Minnesota State University, Mankato (2011).
- MA Development Evaluation and Management, University of Antwerp, Belgium (2008).
- BSc. Planning. Kwame Nkrumah Univ. of Science and Tech., Kumasi, Ghana (1999).

References

References are available on request.