

SYLVESTER INKOOM

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Professional Summary

- Excellent Data Scientist with expertise in advanced data management and analytics, financial data analytics, computational statistics, applied optimization & operations research techniques, intelligent transportation systems, connected and autonomous vehicle systems.
- Ability to work on teams, coordinate groups and work independently
- Excellent interpersonal skills, and ability to write and communicate effectively
- Community involvement as a mentor and volunteer with diverse populations

Areas of Expertise

- Machine Learning & Deep Learning Frameworks
- Cloud Computing
- Big Data Analytics
- Connected and Autonomous Vehicle Systems
- Statistical and Mathematical Modelling
- Advanced Data Management and Analytics
- Applied Optimization
- Operations Research

Technical Skills

- *Data Analysis/ Big Data Tools* SQL, Python, SAS, R, Databricks, Jupyter, Spark, Scala, AWS
- *Mathematical Programming / Optimization Tools* EC2, S3, Athena, Glue, Hadoop, Microsoft Azure, Tableau
Mosel Express, PULP, COIN OR, ESRI ArcGIS, MicroStation, Mathcad

Certifications

- “**SAS Programming and Data Analysis**”, a 4-course specialization in SAS programming in Florida State University, Certificate earned on May 2018
- “**Hadoop**” Starter Kit online course by Hadoop in Real World on Udemy. Certificate earned on March 2018
- “**Deep Learning**”, a 5-course specialization by deeplearning.ai on Coursera. Specialization Certificate earned in March 2018
- “**Big Data with Spark and Scala**”, Big data analysis on Coursera. Specialization Certificate earned in October 2019
- “**Going Cloud Native on Amazon Web Services (AWS)**” on Coursera, Specialization Certificate earned in October 2019

Education

Doctor of Philosophy in Civil (Transportation) Engineering	4.00 GPA
Florida State University, FL 32306	Spring 2019
Master of Science Statistical Data Science	3.92 GPA
Florida State University, FL 32306	Spring 2018
Master of Science in Civil Engineering	3.75 GPA

Memberships / Associations

American Society of Civil Engineers
American Statistical Association

Institute of Transportation Engineers
Golden Key Honor Society

Data Scientist, American Express	Spring 2020 – Present
Data Scientist, The Hertz Corporation	Spring 2019 – Fall 2019
Intern, JACOBS, Intelligent Transportation Systems / Transportation Engineering	Summer 2018 – Fall 2018
Graduate Research Assistant, FAMU-FSU University Transportation Center	Fall 2015 – Spring 2019
Graduate Research Assistant, FAMU-FSU College of Eng. / FSU Dept. of Statistics	Fall 2013 – Spring 2019

Projects

- **AMERICAN EXPRESS**

Team lead at the Artificial Intelligence / Machine Learning Center of Excellence (AI/ ML CoE) at American Express.

At the AI/ ML CoE, our team leverage and integrate machine learning and AI tools for business planning processes (forecasting credit, predicting fraud as well as delivering volume analytics) for global capacity and contact management.

Areas of Expertise: Machine Learning, Big Data, Time Series & Forecasting, Optimization

Project Details

ML STUDIO - This platform and associated language and libraries were used for data preparation, cleaning & manipulation and for machine learning modeling.

PYTHON – This language and associated libraries (pandas, numpy, scikit learn, PULP etc.) were used for optimization and machine learning and time series modeling.

HIVE – This platform was used for data mapping, reducing and collection of over 6 million rows of data

FTP – This secure protocol is used to ingest and transfer data remotely and locally for storage and data analysis.

TABLEAU – This platform was employed for data visualization.

TERADATA – This database platform was employed for data manipulation, querying and imputation.

- **THE HERTZ CORPORATION**

Built a car management system for the optimization of the acquisition and rotation of cars for the Hertz Corporation for the USA operations.

The project employs open source and proprietary packages (PULP, Mosel Express, COIN OR, SQL, Python, Microsoft Azure Databricks, Amazon Web Services S3) in building the robust acquisition and rotation system.

The project is presently saving the company about \$ 2.5 million in acquiring and utilizing proprietary software for such actions per year.

Project Details

PYSPARK - This language and associated libraries were used for data preparation, cleaning and manipulation

PYTHON – This language and associated libraries (pandas, numpy, scikit learn, PULP etc.) were used for optimization and mathematical modeling.

SPARK – This language and associated libraries were used for data mapping, reducing and collection of over 32 million rows of data

AWS S3 – This storage service was used to store and retrieve data for analysis.

SCALA – This language and associated packages were used for data analysis.

AZURE DATA LAKE / DATABRICKS – This cloud platform used for data analysis along with the AWS DATABRICKS

TABLEAU – This platform was employed for data visualization.

ORACLE SQL – This database platform was employed for data manipulation, cleaning and imputation

AWS GLUE / ATHENA – These services were employed for creating data jobs and querying big data for analysis.

- **JACOBS/CH2M INTELLIGENT TRANSPORTATION DESIGN**

This project employed statistical models and machine learning frameworks to predict the condition (failure and deterioration times) of Intelligent Transportation Systems devices / vehicle to infrastructure communication units (roadside units) in the event of natural hazards.

Project Details

PYTHON – This language and associated libraries (pandas, numpy, scikit learn etc.) were used for **machine learning, deep learning and statistical learning models**. Models include Partitioning, Bootstrap Forest, Boosted Trees, Naïve Bayes and K – Nearest Neighbors.

GIT – This platform was employed for version control

- **U.S. DEPARTMENT OF TRANSPORTATION (USDOT) / FLORIDA DEPARTMENT OF TRANSPORTATION** (Project funded at \$ 4.2 million)

Embarked on research in Competing Risks Models for Transportation Infrastructure Systems. I employed parametric and nonparametric models, machine learning methods, deep learning frameworks and other statistical techniques in estimating the survival of transportation infrastructural systems.

Project Details

SAS (Statistical Analysis Software) – This language and associated procedures (PROC) and data (DATA) steps were employed for deterioration modeling, parametric and non-parametric modeling, Bayesian survival modeling. The same was used for data visualization.

ARC GIS– This tool was employed to create mapped visualization using the FDOT data for interpreting outcomes of models.