Taylor Bosier

Data Science Professional
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Adaptable Data Scientist with 4 years' expertise in delivering data-driven solutions across logistics, warehousing, and transportation. Proficient in Python and SQL. I have crafted impactful models with a technique-agnostic approach. Blending a rigorous Mathematics education with proactive self-learning, I've driven significant operational transformations and cost savings. My passion lies in solving intricate business challenges, always with an eye for optimal results and the joy of problem-solving.

Professional Experience

Data Scientist I *Sept 2021 – Present*
Knight-Swift Transportation *Phoenix, AZ*

- Reengineered and enhanced a Mixed Integer Programming model using Python, SQL, and the Gurobi API within a Flask application, dramatically increasing its applicability from 20% to 85% of daily load planning.
- Applied Poisson Distribution, Monte Carlo Bootstrap, and Bayesian Monte Carlo methods to assess insurance claim risk, leading to projected cost savings of $10 million.
- Optimized an XGBoostClassifier driver retention model using Optuna, increasing the F1 score from 31% to 51%; sped up 26 queries with concurrent.Futures.processPoolExecutor.
- Increased Driver Manager KPIs by creating a backend CRUD async python job that found drivers in D status, calculated their ETA for each stop via async Python calls, and stored in Kafka.
- Increased logistics brokerage profitability by utilizing univariate Time Series forecasting against Spot Market rate

Business Analyst *June 2019 – September 2021*
Chain Link Services

- Found optimal warehouse locations and number of required warehouses utilizing k-means clustering algorithms and various statistical analyses, reducing inventory costs and stockouts
- Reduced inventory space and holding costs by utilizing a Facebook Prophet model to predict inventory demand
- Increased warehouse pick speeds by utilizing an apriori model to re-structure warehouse layout and implemented Traveling Salesman model to pack pick orders together to speed up picks
- Utilized a Safety Stock algorithm to set inventory levels required at offsite warehouse locations, reducing physical inventory space and lowering purchase costs

Technical Skills and Competencies

- Python – Pandas, NumPy, CatBoost, scikit-learn, scikit-survival, SimPy, PySpark, Gurobi, SQL libraries, Async
- SQL – Microsoft SQL Server, DB2, Hadoop, Elasticsearch
- APIs – Flask, FastAPI, Postman
- Data Visualization – Tableau, Matplotlib
- Mathematical and Statistical Modeling – Optimization (VRP) Regression, Classification, Dimension Reduction, Time Series, Simulation
- Version Control – Git
- Cloud – Cloudera Data Science Workbench

Education

Georgia Institute of Technology Online
Master of Science in Analytics – Computational May 2025

New Mexico State University Las Cruces, NM
Master of Science in Mathematics *May 2018*

New Mexico State University Las Cruces, NM
Bachelor of Science in Mathematics *May 2016*