

# Taylor Bosier

Data Science Professional

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Data Scientist with 4 years of professional experience, specializing in delivering data-driven solutions in the logistics, warehousing, and transportation sectors. Professional experience utilizing Python and SQL, with a track record of developing impactful statistical, mathematical optimization, and simulation models. Currently applying these skills to enhance strategic decision-making for the nation's largest full truck-load carrier. Holds a Master's degree in Mathematics and maintains a commitment to applying data insights to solve complex business problems and optimize operations. Focused on delivering solutions that meet core business needs and drive impact.

## Professional Experience

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### 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. Self-taught Optimization modeling to achieve this increase
- Increased Driver Satisfaction after developing Natural Language Processing (NLP) models that helped account managers with Driver Satisfaction Surveys using Python and SQL
- Increased ETA model accuracy 10% by developing and implementing a CatBoost Regression model for expected driver status hours of service
- Leveraged data analysis and simulation techniques to redesign and optimize the company's truck fleet maintenance program, significantly reducing costs and improving operational efficiency.

### 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

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- 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 (MIP, VRP, TSP), Regression, Classification, Dimension Reduction, Time Series, Simulation
- Version Control – Git
- Cloud – Cloudera Data Science Workbench

## Education

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### 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*