

# Zack Mosley

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[Portfolio](#) | [LinkedIn](#)

## Education

### Master of Data Science

**University of California, San Diego**

University GPA: 3.78 /4.00

- Relevant Coursework: Statistics, Linear Algebra, Data Visualization, NLP, Big Data

La Jolla, CA

Expected Graduation: June 2026

### B.S. in Management Information Systems

**California State University, Sacramento**

University GPA: 3.80 /4.00

Sacramento, CA

May 2024

- Honors: **Magna Cum Laude**, Dean's Honor List
- Relevant Coursework: Machine Learning, Data Mining, Advanced Analytics, Data Mgmt

A.S. in Accounting

May 2021

A.S. in Business Administration

## Technical Projects

### Vehicle Value Estimator (Personal Project, [Full Project](#))

End-to-end vehicle price prediction dashboard using scraped data from Cars.com.

- Built **ETL pipeline** to ingest/clean **80K+ vehicle listings** across top 10 U.S. manufacturers
- Engineered features (trim, mileage, year, body style); analyzed price trends via EDA
- Analyzed depreciation trends by make/year to quantify long-term value patterns
- Developed predictive model using LightGBM regressor (**MAE ~\$1.7K, R<sup>2</sup> ≈ 0.96**)
- Deployed interactive Dash/Plotly dashboard for real-time pricing & feature insights

### NYC Taxi Fare & Tipping Analysis (Academic Project, [My Contributions](#) | [Full Project](#))

Led analysis of **150M+** NYC taxi rides using Spark on SDSC supercomputer, earning **3rd place** in class-wide project competition.

- Conducted EDA on 20GB+ trip data: time trends, fare efficiency, tipping patterns
- Applied filters to outliers/invalid trips; engineered time & efficiency features
- Processed 170M+ trip records on distributed **Spark** cluster, retaining 88% clean data
- Developed fare predictor (**MAE ~\$1.91, R<sup>2</sup> ≈ 0.94**) and tip classifier (**~79% accuracy**)
- Benchmarked against baseline regression, achieving **36% RMSE reduction**
- Evaluated performance with stratified sampling, residual analysis, and baseline benchmarks

## Skills

**Languages & Tools:** Python (Pandas, NumPy, Scikit-learn, Plotly, Matplotlib, Seaborn), SQL (PostgreSQL, MySQL), D3.js, Tableau, Power BI, Git, JavaScript, Streamlit, Azure, AWS, Excel

**ML & Analytics:** Statistical Analysis, Regression, Classification, NLP, A/B Testing, Feature Engineering, Cross-Validation, Model Evaluation

**Data Engineering:** ETL, APIs, Spark, Dask, Data Pipelines

## Work Experience

### DBI Beverage

2014 - 2020

Stockton, CA

**Lead AM Warehouse Associate**

- Oversaw distribution for **Coors Brewing** and Constellation brands (**Modelo, Corona**)
- Improved inventory accuracy **12%** by analyzing records and resolving data discrepancies
- Managed inbound logistics for **50K+ cases/day**, maintaining smooth warehouse operations
- Reviewed daily operational metrics to pinpoint inefficiencies and recommend workflow changes
- Coordinated cross-team communication ensuring accuracy and timely inventory updates