Scot Carpenter

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LinkedIn | Portfolio

EDUCATION

University of Arizona | Bachelor of Applied Science: Applied Computing | AI and Data Science Emphasis | Exp Fall 2025

- Coursework: Data Engineering, Data Mining and Discovery, Data Science, Data Analysis and Visualization, Statistics, Analysis of Discrete Structures, and Artificial Intelligence.
- Tau Sigma Honor Society, Dean's List with Distinction

SKILLS

Coding Languages: SQL, Python, R
Libraries/Tools: Jupyter Notebook, R Studio, Pandas, Matplotlib, SciKit-Learn, Tidyverse, and ggplot
Analytics: Data Cleaning, Feature Engineering, Statistical Modeling, Data Analysis, Data Visualization and Storytelling.

EXPERIENCE

The Global Career Accelerator | *SQL & Python Trainee* | Remote May 2025 - August 2025

- Analyzed real-world datasets in Jupyter Notebook, producing actionable insights and recommendations.
- Communicated data analysis results verbally, in writing, and by creating visualizations in Plotly and Matplotlib.
- Examined user behavior across various industries and scenarios, identifying key trends and patterns.
- Collaborated with a diverse global team to complete tasks and deliver timely and accurate projects.

PROJECTS

Go Ahead and Jump: Early and Often | *2025 SMT Data Challenge* Completed August 2025

- Leveraged Python and SQL to aggregate, clean, and engineer features from unorganized Minor League player and ball-tracking data.
- Developed a cross-validated logistic regression model to estimate outfielder catch probability.
- Created visualizations to explore the relationship between catch probability and metrics of an outfielder's route.
- Introduced the metric of Route Intensity, measuring the percentage of the route that is performed at high speeds, and quantified the metric's positive impact on generating outs on the most difficult plays.
- Recreated Statcast's Jump metric to classify outfielders based on movement timing and assess the effectiveness of early sustained motion throughout a route.

Worth a Shot? NBA Shot Analysis Completed December 2024

- Utilized R and R Markdown to analyze shot position data for every field goal attempt made in the NBA between the 2003 to 2024 season with a focus on changes in shot selection.
- Analysis of scoring trends revealed that the mean points per game since the NBA lockout has increased by 22% and the mean points scored by 3-point field goals have increased by 102%.
- Derived league wide field goal percentage per range and orientation from basket to calculate expected values for points scored, revealing that 3-point field goals have higher scoring potential at lower likelihoods of success than 2-point field goals with greater likelihoods of success.
- Communicated data-driven shot selection recommendations and performance insights using data visualizations.

Product Waste Reduction Completed December 2024

- Leveraged Python to aggregate sales data from Square, Toast, and vendor invoices to provide recommendations to reduce product waste and increase sales efficiency for local business.
- Calculated break-even points and suggested price points to match profit margin expectation for each product.
- Derived expected values for products taking into consideration seasonality and day of the week to provide inventory recommendations that reduced product waste by 25% and increased profit 10% daily.