**Rooster Data Story Video Script (10 mins)**

**Intro (1 min)**

Rooster’s goal is to optimize profitability through smarter pricing. In this project, I analyzed customer data to identify high-value segments, predict customer retention, and guide pricing decisions. My focus was to help Rooster shift from a sales volume strategy to a profit-driven model, reduce out-of-stock issues, and apply predictive analytics to support pricing decisions.

**Data Overview (1 min)**

The dataset that I worked with contained several worksheets, including orders, products, customers, and pricing history. After merging and cleaning the data, I performed exploratory and predictive analyses across more than 20,000 transaction records and customer metrics. I used both Python and Tableau to uncover patterns and build models."

**Key Findings (2 min)**

**1. Price vs Profit Trends:**

* I found that the most profitable categories include the 15 Pack Build Your Own and the 10 Pack. These options had both higher prices and higher margins.
* Pack sizes like XL, L, and XXL contributed the most to total profit, while smaller or extra-large sizes like XS and 6XL had minimal impact.

**2. Regional and Retention Patterns:**

* Regions like Intl Zone C and South Australia had the highest average return probability, suggesting that customers in these areas are more likely to become repeat buyers, making them strong candidates for loyalty programs or targeted marketing efforts.
* The customer retention heatmap revealed that regions like New Zealand and the Australian Capital Territory showed higher retention, especially among male and unknown-gender customers.

**Classification Model (2 min)**

To predict customer retention, I developed a Random Forest Classifier using variables such as days\_active, total\_units, and total\_cost.  
The model performed well, with strong precision and recall, indicating that it can reliably identify customers who are likely to return.

This model helps identify loyal customers early, so Rooster can invest in keeping them engaged."

**Regression Model (2 min)**

I then built a Random Forest Regressor to forecast monthly customer profit.

The regression model performed well, with an RMSE of 8.52 indicating low prediction error, and an R² score of 0.85 showing it explains about 85% of the variance in customer profit.

The most important predictors for profitability were total\_cost and total\_units, indicating that customer spend and volume are strong indicators of future value.

This allowed me to estimate the long-term value of customers and propose better resource allocation for high-value segments."

**Tableau Dashboard Insights (1 min)**

I used Tableau to bring the story to life visually. Three dashboards stood out:

1. **Return Probability by Region** – Helped identify where customers are more likely to become repeat buyers, making them strong candidates for loyalty programs or targeted marketing efforts
2. **Price vs Profit by Category** – Highlighted which product categories yield the highest margins.
3. **Profit by Pack Size** – Showed that XL, L, and XXL sizes consistently outperform others in terms of profit."

**Recommendations (1 min)**

* Target customers who purchase large bundles like the 10 and 15 Packs, especially in XL and L sizes, where profit is highest.
* Use retention campaigns in high-performing regions like New Zealand and Australian Capital Territory.
* Implement dynamic pricing tiers to encourage bulk purchasing and maximize margin.  
  Leverage targeted marketing in Intl Zone C and South Australia, where customers are more likely to return, to strengthen loyalty and maximize long-term value.
* Use predictive models to prioritize high-value customers in marketing and inventory strategies, improving Rooster’s ROI."