# Project Statement for Data Analyst: Business Insights and Impact Analysis

## Objective

As the CEO of Northwind Traders, I am commissioning a data-driven project to uncover critical insights across our customer base, product categories, and sales trends, as well as assess employee performance and discount impacts. Your analysis will aim to answer essential business questions and provide actionable recommendations that support strategic decision-making in customer engagement, revenue growth, and operational efficiency. Given that SQL will be used exclusively, this project will not involve data visualization but should deliver clear and well-documented query outputs for each key question.

## Scope of Analysis

### Customer Analysis

* Q1: Identify top customers by order volume to better understand customer engagement and target high-value relationships.

### Revenue Insights

* Q2: Calculate total revenue by product category to pinpoint areas driving the most sales and assess where to focus promotional efforts.

### Product Performance

* Q3: Determine our most popular products by sales quantity to inform inventory and promotional strategies.

### Employee Performance

* Q4: Identify top-performing employees based on orders handled, supporting recognition and training initiatives.

### Sales Trends

* Q5: Analyze sales trends over time (monthly, quarterly, and yearly) to help identify seasonal patterns and optimize resource allocation.

### Discount Impact

* Q6: Assess the effect of discounts on order frequency and quantity to gauge the effectiveness of discounting as a sales driver.
* Q7: Calculate the percentage of orders with discounts and analyze its revenue impact, determining if discounts drive sufficient sales to justify any reductions in margin.

### Regional Analysis

* Q8: Identify regions generating the highest revenue, helping to focus efforts on areas with the greatest growth potential.
* Q9: Determine top products in high-revenue regions to support targeted marketing and supply chain strategies.

### Customer Retention

* Q10: Calculate customer retention rates over a defined period to inform loyalty and customer satisfaction efforts.

### Productivity and Satisfaction

* Q11: Explore the relationship between employee productivity (order processing times) and customer satisfaction (timely and complete orders) to evaluate if operational efficiencies are impacting customer experiences.

## Key Deliverables

* SQL Query Outputs: Provide the complete SQL scripts for each question, with clear comments explaining each step in the queries.
* Business Insights Summary: Along with your queries, include brief summaries of your findings for each question. These summaries should offer straightforward insights that align with business needs.
* Actionable Recommendations: Based on your insights, provide well-grounded recommendations for strategic actions or operational improvements.
* Impact Analysis: For each area of analysis, assess potential impacts on revenue, customer satisfaction, and operational efficiency, clearly justifying recommendations based on data trends.

## Expectations and Timeline

Ensure data accuracy and integrity, with clearly labeled outputs.  
Prioritize efficiency in queries to avoid performance lags.  
Regular updates on progress and any challenges encountered are expected.  
  
Complete this analysis within four weeks, with deliverables submitted in a format conducive to presentation and review by the executive team.

By successfully delivering on this project, your work will provide Northwind Traders with valuable insights that directly support strategic growth, customer retention, and operational efficiency. I am looking forward to seeing your findings and recommendations.