Product Requirements Document (PRD)

Project Title: Nike Product Analysis and Management

Objectives

- **Purpose:** Analyze Nike's product sales data to provide actionable insights that improve product performance, optimize inventory management, and drive strategic decision-making.
- **Primary Goal:** Develop a data-driven understanding of product performance across regions, sales channels, and time periods to enhance Nike's product management strategy.

Goals

- **Strategic Goals:**
  - Identify top-performing products and regions.
  - Highlight underperforming products and areas for improvement.
  - Recommend strategies to optimize pricing, inventory, and distribution.
  - Provide insights into customer purchasing trends and behavior.
- **Operational Goals:**
  - Clean and preprocess the dataset for analysis.
  - Visualize key metrics such as total sales, units sold, and revenue trends.
  - Deliver a user-friendly dashboard showcasing actionable insights.
  - Compile findings into a comprehensive presentation for stakeholders.

Context

- **Business Need:** Nike aims to maintain its leadership in the sportswear industry by leveraging data analytics to manage product performance effectively and improve decision-making processes.
- **Scope:** Analyze sales data columns, including invoice date, product, region, retailer, sales method, state, price per unit, total sales, and units sold.
- **Stakeholders:** Nike's product managers, regional sales teams, and inventory planners.

Strategy

- **Data Analysis Workflow:**
  - **Data Cleaning and Preparation:** Remove inconsistencies and prepare the dataset for analysis.
  - **Exploratory Data Analysis (EDA):** Identify trends, correlations, and patterns in the data.
  - **Visualization:** Use Power BI to create interactive dashboards showcasing key insights.
  - **Reporting:** Summarize findings in a PowerPoint presentation with actionable recommendations.
- **Key Deliverables:**
  - Cleaned dataset.
  - Interactive dashboard in Power BI.
  - Final presentation with insights and recommendations.

Problems to Solve

- **Product Performance:** Which products are generating the most and least revenue?
- **Regional Disparities:** Which regions are driving sales, and which are underperforming?
- **Sales Channel Efficiency:** How do online and in-store sales compare in terms of revenue generation?
- **Seasonal Trends:** Are there patterns in sales across specific months or quarters?
- **Pricing Analysis:** How does price per unit impact total sales and revenue?

Assumptions

- The dataset provided is complete, accurate, and up-to-date.
- Insights generated will directly influence product and sales strategies.
- Visualizations will be accessible and easily interpretable by non-technical stakeholders.
- Stakeholders will actively use the recommendations to guide decision-making.

Risks

- **Data Quality Issues:** The dataset may contain missing, incomplete, or inconsistent entries, potentially impacting the analysis.
- **Interpretation Challenges:** Stakeholders may misinterpret data visualizations or fail to act on insights.
- **Scope Creep:** Additional analysis requests may extend project timelines.
- **Technical Constraints:** Potential limitations in Power BI or other tools that may impact the visualization process.

- **Bias in Analysis:** Insights may reflect biases in the data, such as limited time periods or regions.

Metrics for Success

- Timely delivery of cleaned data, dashboards, and presentations.
- Positive feedback from stakeholders on the usability and relevance of insights.
- Implementation of at least two data-driven recommendations by Nike's product management team.

Next Steps

- Finalize project objectives and scope with stakeholders.
- Begin data cleaning and exploratory analysis.
- Develop initial visualizations and review them with the team.
- Prepare the dashboard and presentation for final delivery.