**Introduction**

During my bootcamp journey, I embarked on a project to analyse the sales performance of High Impact Careers. This project began with obtaining a dataset in Excel format and culminated in deriving actionable insights and recommendations for the business. Here, I’ll walk you through the process of data cleaning, analysis, and visualisation, and share the key insights I uncovered.

**Data Preparation and Cleaning**

**Initial Data Examination**

The dataset I received was an Excel file containing 34,867 rows and 15 columns. The columns included:

* Order ID  
  - Date  
  - Customer Name  
  - Customer Type  
  - Salesperson  
  - Branch  
  - Customer Age  
  - Customer Gender  
  - State  
  - Product Category  
  - Sub Category  
  - Payment Option  
  - Quantity  
  - Unit Cost  
  - Unit Price

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Excel File

**Data Cleaning in Excel**

The initial step was to ensure the data was clean and organised. This involved:

1. **Standardising Date Formats**: Ensuring all date entries were in a consistent format.  
2. **Renaming and Ordering Headers**: Renaming headers for clarity and arranging them logically.  
3. **Correcting Data Types**: Ensuring each column was in the appropriate format (e.g., numerical, text).

**Creating Dimension Tables**

To simplify analysis and avoid redundancy, I created two dimension tables:

1. **Customer Table**: Containing Customer Name, Customer Type, Customer Age, and Customer Gender. Unique IDs were created to link this table to the fact table.  
2. **Product Table:** Including Product ID, Product Category, and Product Sub Category. Unique IDs were also created here.

By organising data into these tables, I streamlined the dataset, making it more manageable for analysis in Power BI.

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Customer Table and Product Table

**Data Analysis and Visualisation in Power BI**

With the cleaned and structured data, I imported it into Power BI for analysis and visualisation. Power BI’s robust tools allowed me to uncover several key insights.

**Key Performance Indicators (KPIs)**

Using Power BI, I was able to calculate and visualise several crucial KPIs:

* **Total Number of Customers  
  - Total Product Costs  
  - Total Revenue  
  - Total Profits  
  - Total Number of Products  
  - Average Customer Age  
  - Number of Branches  
  - Total Quantity Sold  
  - Average Quantity Purchased per Customer  
  - Total Number of Salespersons**

A screenshot of a data dashboard

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Dashboard 1

**Detailed Insights**

To address specific business questions, I analysed various dimensions and measures:

1. **Profit by Age Group:**Identified which age groups were most profitable, allowing the business to target these demographics more effectively.  
   2. **Profit by Product Category and Sub Category:** Determined which categories and subcategories were driving profits, providing insights into inventory and marketing strategies.  
   3. **Annual and Quarterly Profit Trends:** Analysed profit trends over time to identify seasonal patterns and peak periods.  
   4. **Salesperson Performance:** Evaluated which salespersons were generating the most profit, informing training and incentive programs.

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Dashboard 2

**Interactive Filtering**

The visualisations included interactive filters for date, year, month, and product subcategory, enabling dynamic analysis and more granular insights.

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Location Dadhboard

**Recommendations**

Based on the analysis, I provided several recommendations:

1. **Focus on Profitable Age Groups:** Since certain age groups were more profitable, marketing efforts should be tailored to these demographics.  
   2. **Optimise Product Offerings:** Increase inventory and promotional efforts for high-performing product categories and subcategories.  
   3. **Seasonal Promotions:** Leverage the insights from quarterly trends to run targeted promotions during peak periods.  
   4. **Salesperson Training:** Implement training programs based on the practices of top-performing salespersons to boost overall sales performance.

A close-up of a document

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Insights and Recommendation

**Conclusion**

Analysing the sales performance data of High Impact Careers was a transformative experience. It allowed me to apply data cleaning, analysis, and visualisation techniques to derive actionable business insights. The structured approach, from data preparation to detailed analysis in Power BI, ensured a comprehensive understanding of sales dynamics, leading to informed recommendations that can drive business growth. This project not only improved my technical skills but also underscored the value of data-driven decision-making in today’s business environment.

[Data Analysis](https://medium.com/tag/data-analysis?source=post_page-----c1cdd89ea694--------------------------------)

[Data Visualization](https://medium.com/tag/data-visualization?source=post_page-----c1cdd89ea694--------------------------------)

[Sales Performance](https://medium.com/tag/sales-performance?source=post_page-----c1cdd89ea694--------------------------------)

[Sales Dashboard](https://medium.com/tag/sales-dashboard?source=post_page-----c1cdd89ea694--------------------------------)

[Power Bi](https://medium.com/tag/power-bi?source=post_page-----c1cdd89ea694--------------------------------)