Power BI Capstone Project

Data Analytics

10Alytics

TECHTRONIX

A hi-tech case study

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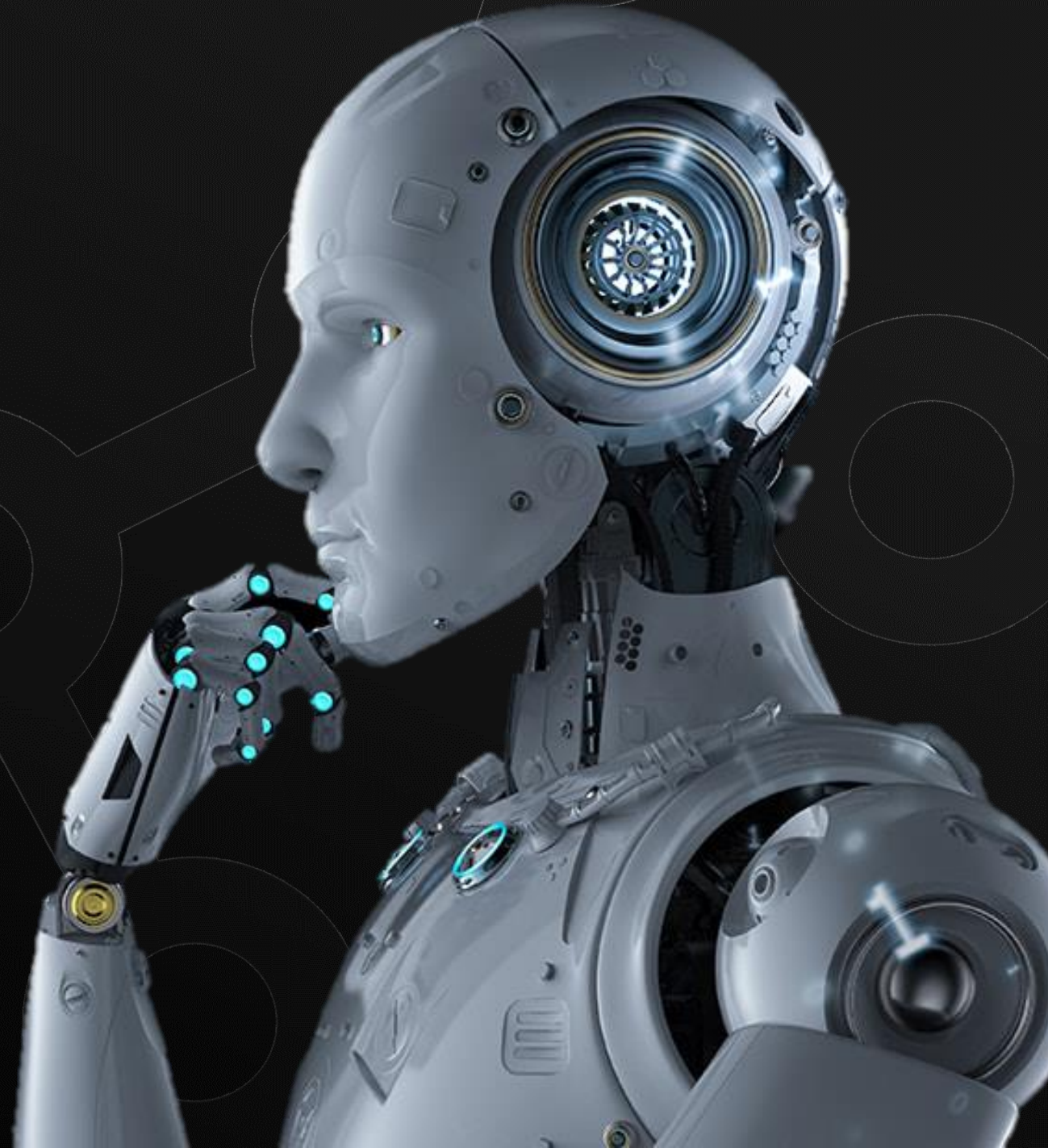
Techtronix Innovations, a forefront player in the microchip and robotics industry, is encountering challenges in streamlining its sales strategies, optimizing production planning, and pursuing market expansion. The company boasts an extensive portfolio that caters to automotive, consumer electronics, and industrial sectors. However, it grapples with demand unpredictability, inventory management inefficiencies, and the identification of profitable market opportunities.

Over the previous year, Techtronix Innovations has meticulously compiled a dataset encompassing each transaction, encompassing sales data, customer interactions, product specifics, and financial metrics. This dataset presents an invaluable opportunity for in-depth business performance analysis, trend identification, and insight extraction to inform strategic decisions.

Data Dictionary

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Column Name	Description
• TransactionID	Unique identifier for each transaction
• Date	Date of the transaction
• ProductID	Unique identifier for the product
• ProductName	Name of the product
• ProductCategory:	Category of the product (Microchip, Robotics, Sensor)
• QuantitySold	Number of units sold in the transaction
• UnitPrice	Sale price per unit
• TotalSaleAmount:	Total revenue generated from the transaction
• CustomerID	Unique identifier for the customer

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• CustomerName	Name of the customer
• CustomerSector	Sector the customer belongs to
• Country	Country of the transaction
• Region	Region of the transaction
• ProductionCost	Cost of producing the units sold
• Profit	Profit from the transaction
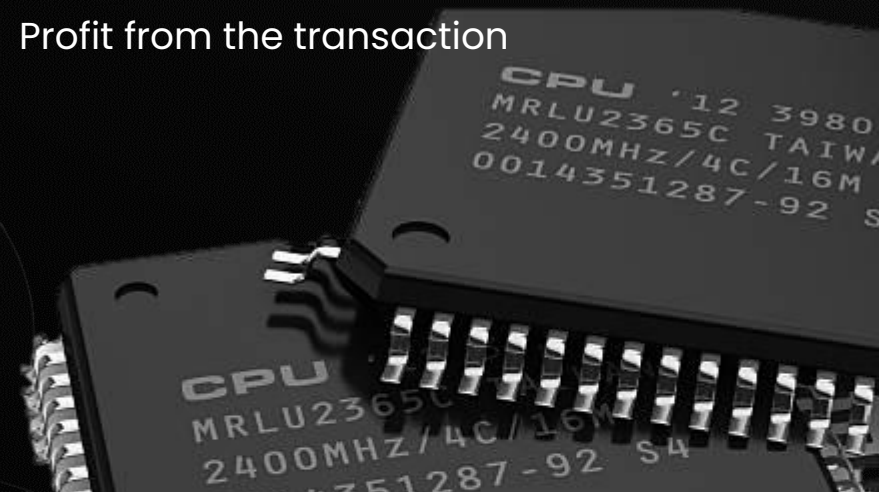
Analysis Goals

You will utilize the dataset to guide **Techtronix** Innovations in overcoming its current obstacles through the creation of an automated Power BI report. This report should focus on:

1. **Sales Performance Analysis:** Uncover sales trends across various product categories, sectors, regions, and timeframes. Highlight the best and worst performers.

2. **Customer Insights:** Dive into customer segmentation to reveal purchase patterns, preferences by sector, and geographic distribution. Identify the sectors contributing most significantly to sales and profitability.

3. **Inventory Optimization:** Evaluate inventory management against sales figures to pinpoint production planning mismatches. Propose methods to better align production with market demands.

4. **Profitability Analysis:** Analyze the profitability across different product categories, taking into account sales revenue and production costs. Point out products with high margins and suggest cost reduction strategies.

5. **Market Expansion Opportunities:** Analyze sales and customer data to discover new markets for expansion, emphasizing regions and sectors with untapped potential.

- **Feel free to create a multiple paged Dashboard.**
- **Feel free to reference external sources as well.**
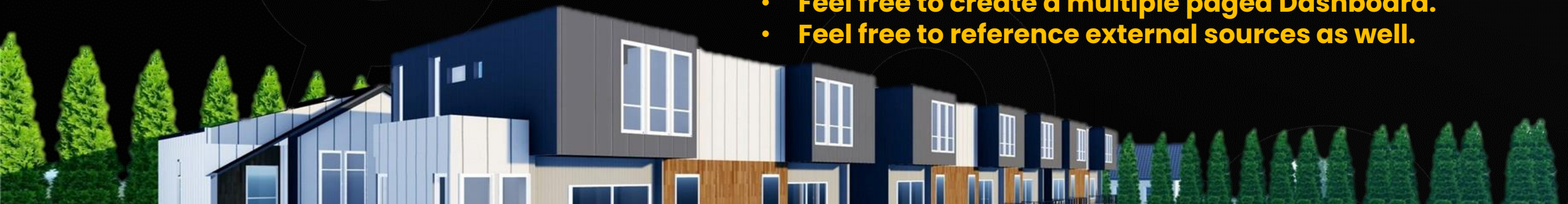
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The expected outputs from students include:

- A comprehensive Power BI report featuring a dashboard that encapsulates key findings on sales performance, customer insights, and profitability.

- A final power point presentation detailing your analysis, insights, and strategic recommendations for Techtronix Innovations.

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Evaluation Criteria

- Projects will be evaluated on the thoroughness of the analysis, effectiveness of data visualizations, and the strategic value of the actionable recommendations provided.

Download the datasets here

Dataset

GOOD LUCK!!!!

- complete your work and **submit your solution via the submission box in your google classroom**, ensure to be present during your **presentation** to get invaluable feedback

- AND **DON'T** FORGET TO POST YOUR WORK ON **LINKEDIN** (#SHOW YOUR WORKINGS)

  Also feel free to **collaborate** with your group members to brainstorm.

- If you have any question, please reach out via your WhatsApp group. Tag **@khadijat, @Jennifer, @Muhammad Suleman, or @oladayo**

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