Data Engineering and Analytical Tools Project

Project Overview and Objectives

You are the Data Analyst for Matrix Manufacturing and Retail. Your role is pivotal in both performance reporting and analysis, as well as lending insight and direction to possible business decisions. The company sells in excess of 100 bicycle related products across various departments and provides delivery nationwide. Your manager has an important meeting with
senior executives in one week's time to discuss business performance.

As the data analyst, your manager has requested that you produce a report showing the following:

1. How sales on the bike product category are performing (frames and mountain)
2. A breakdown of sales by product
3. Figures on customer loyalty
4. You are also expected to advise on any issues or recommendations you feel may face the organisation based on your report.

Full specification and requirements for this project are below.

Project Outputs and Deliverables

Once completed, to demonstrate completion of the tasks you will be asked to provide a series of outputs that should be submitted to Google Classroom:

Deliverable	Output
Structuring the problem and work planning	● A written understanding of the task ● A project plan for the duration of the project
Engaging the customer	● A documented representation of requirements gathering, reflecting the approach that may be taken to obtain the desired outputs
Data gathering	● Written 'SELECT' statements used to extract relevant data tables from MS SQL database to export for analysis
Conducting analysis	● Data mining, forecasting and data modelling to identify trends and/or patterns using either R or Python
Developing insight and making recommendations	● Translating analysis into insight, extracting the meaning of each analysis/piece of informations from charts and tables
Communicating recommendations	● Using the generated charts and tables to provide arguments to underpin the case to be made to executives