

CAPSTONE PROJECT

Step 1: Define the Objective

Select a Topic: Choose a specific area or problem you want to analyze. It could be related to finance, marketing, healthcare, etc.

Define the Objective: Clearly state what you aim to achieve through your data analysis. For example, uncovering trends, making predictions, identifying insights, etc.

Step 2: Data Collection and Preparation

Data: visit Kaggle or Data.gov to download data for your analysis. Ensure it's relevant, and in a format compatible with Excel.

Data Cleaning and Preprocessing: Clean the data to remove any inconsistencies, errors, or missing values. Format it properly for analysis.

Step 3: Exploratory Data Analysis (EDA)

Descriptive Statistics: Compute summary statistics like mean, median, mode, standard deviation, etc., to understand the basic characteristics of your data.

Data Visualization: Create visualizations such as bar charts, histograms, scatter plots, box plots, etc., to explore the relationships and patterns in your data.

Step 4: Data Analysis

Ask your selected data at least 10 questions.

Regression Analysis: Perform regression analysis to understand the relationships between variables and make predictions.

Step 5: Interpretation and Insights

Interpret Results: Analyze the findings from your data analysis and draw conclusions. Identify key insights and trends.

Recommendations: Based on your analysis, provide recommendations or actionable insights that address the objective of your project.

Step 6: Documentation and Presentation

Write a Report: Document your entire analysis process, including data collection, cleaning, analysis, and interpretation.

Create a Presentation: Develop a visually appealing presentation summarizing your findings. Use charts, graphs, and tables to communicate your analysis effectively.

Step 7: Reflection and Review

Reflect on the Process: Reflect on what you've learned throughout the project and any challenges you encountered.

Review and Feedback: Seek feedback from peers or mentors to improve your analysis and presentation.

Capstone Project Tasks:

Task 1: Choose a topic and define the objective of your analysis.

Task 2: Collect and clean the data required for analysis.

Task 3: Conduct exploratory data analysis using descriptive statistics and visualizations.

Task 4: Perform advanced analysis techniques such as regression or clustering.

Task 5: Interpret the results and derive actionable insights.

Task 6: Document your analysis process in a report and create a presentation to showcase your findings.