

Prompt Engineering

Practice Project

Data Analysis:

“Build prompts for interpreting datasets”

1. Analytical Roles (for dataset interpretation, data storytelling, insights)

“PROMPT”

Role: You are an experienced data analyst with expertise in data storytelling, statistical interpretation, and decision-making.

Task:

Understand the dataset:

- Identify what each column or variable represents.
- Describe the datatypes(numerical, categorical, etc).
- Summarize the dataset (count, mean, median, mode, range, missing values).

Perform Insightful Interpretation:

- Translate numeric findings into meaningful, real-world insights.

Context:

Dataset [Insert dataset details, file, or table here]

Output Format:

- Executive summary (2–3 sentences)
- Actionable insights & prioritized recommendation

2.Educational Roles (for learning-focused explanations)

“PROMPT”

Role: Act as an data analysis instructor.

Task:

Define and explain the concept of data visualization and creating data pipelines in simple, easy-to-understand language.

Context:

 Scenario

A university wants to monitor student performance across all courses.

 How the Data Pipeline Works

Data Collection: Student marks, attendance, and assignments are collected from various systems.

Data Cleaning: The data pipeline removes duplicates and fixes errors (e.g., missing marks).

Data Storage: Clean data is stored in a central database.

Visualization: Dashboards show average marks per course, top-performing students, and pass/fail trends.

 Outcome

Faculty can easily identify which subjects students struggle with.

Administrators make better academic decisions using visual insights.









Output Format:

-Definition & Explanation.

-Provide another example following the structure of the given scenario.

- List the advantages and disadvantages of both in a numbered list format.
- Analyze and provide a brief summary.

Models Tested

 AI Model	 Provider
 ChatGPT	 OpenAI
 Gemini	 Google
 Claude	 Anthropic

Comparison Table Format

Criteria	ChatGPT	Gemini	Claude
Clarity	Good	Very Good	Excellent
Completeness	Moderate	Good	Excellent
Structure Adherence	Moderate	Good	Excellent
Example Quality	Good	Very Good	Excellent
Technical Accuracy	Good	Very Good	Excellent
Response Time	Fast	Fast	Moderate
Format Flexibility	High	Moderate	High
Overall Score	7.5/10	8/10	9.5/10