AICERTs™

AI+ Foundation™

Certification

AI + Foundation

Module 2

Hands-On 2:

Title: Introduction to the Principles of Effective Prompting.

Problem Statement:

Different AI models and prompt types yield varying results in quality and response time. Without a structured approach, users waste time on trial-and-error, leading to inefficiencies. This scenario addresses how to measure, compare, and improve AI performance through prompt optimization, enabling faster, more reliable outputs and actionable insights for all users.

Objective:

To identify the most effective prompt types and AI models that maximize task efficiency, measure time saved, and enable data-driven decisions through clear comparison, visualization, and accessible filtering for all users.

Tools to be Used:

1. Interactive dashboard using Streamlit.

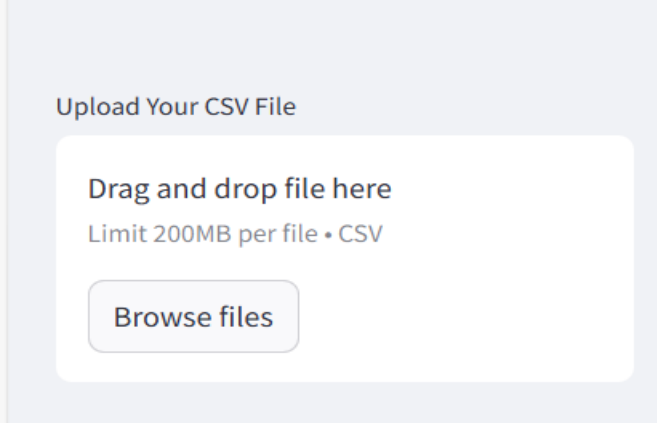
Step to be followed in detailed manner:

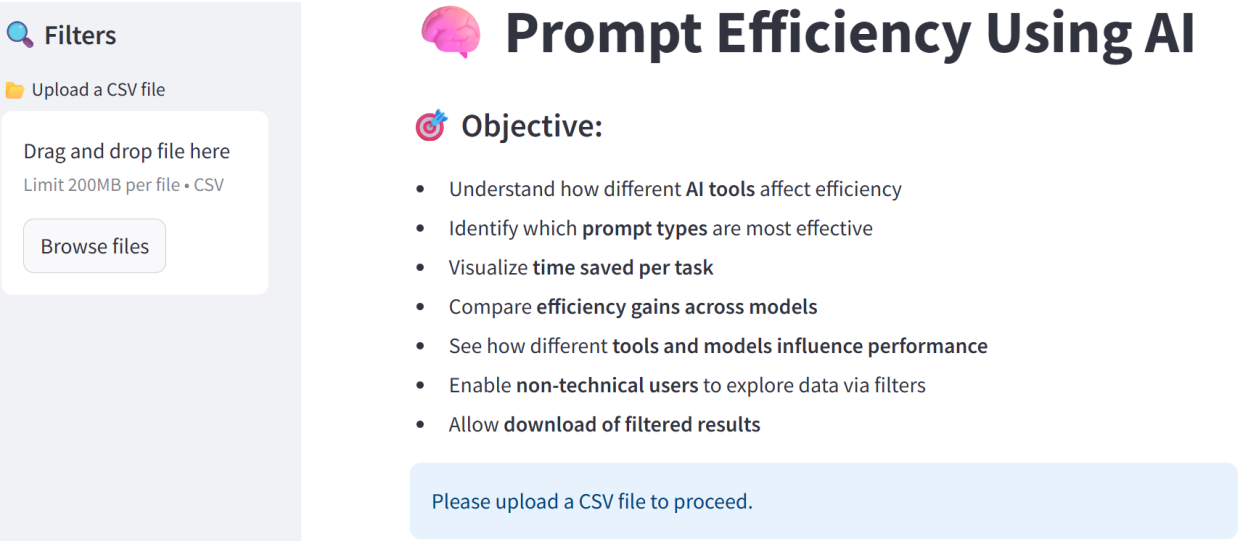
Step-1: Now upload the dataset provided here:
https://drive.google.com/file/d/1OXiE47ITx12xZs43XNU4L8Qc1XsRQc8V/view?usp=sharing

Step-2: Click the link below and upload the dataset file as provided in each module section.

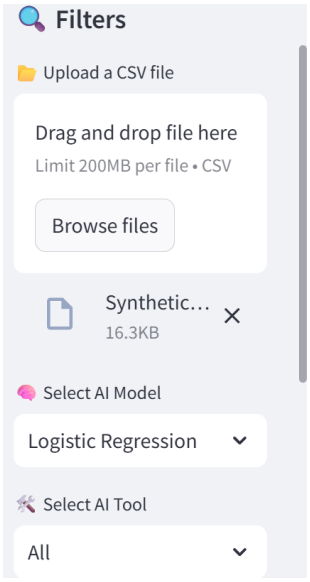
Check it:
https://interactivedashboard.aicerts.ai/AI_Foundation_Lab_2_AI_Prompting_Efficiency

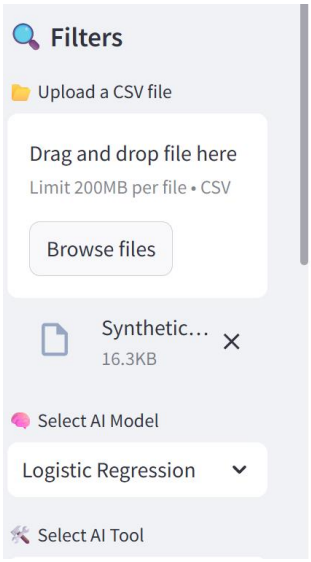
Sample Output:





- Now check the dashboards with all the filters on the left-hand side





Deploy

🧠 Prompt Efficiency Using AI

🎯 Objective:

- Understand how different **AI tools** affect efficiency
- Identify which **prompt types** are most effective
- Visualize **time saved per task**
- Compare **efficiency gains across models**
- See how different **tools and models influence performance**
- Enable **non-technical users** to explore data via filters
- Allow **download of filtered results**

📋 Filtered Data Sample

	Prompt Type	AI Tool Used	User Experience	Task Difficulty	Efficiency Gain (%)
1	Question Answering	BLOOM	Beginner	Hard	35
8	Translation	BLOOM	Beginner	Hard	30
12	Question Answering	GPT-4	Beginner	Hard	20
15	Text Generation	GPT-4	Intermediate	Hard	25
18	Code Completion	GPT-4	Beginner	Hard	15

Total Records: 75

Selected AI Model: `Logistic Regression`

Selected AI Tool: `All`

- Now, Apply the different AI model, AI Tool, Prompt Type, Task Difficulty, Efficiency Gain (%) that are used as filter.

Deploy

Select AI Model

Logistic Regression

Select AI Tool

All

Prompt Type

All ×

Task Difficulty

All ×

Efficiency Gain (%) Range

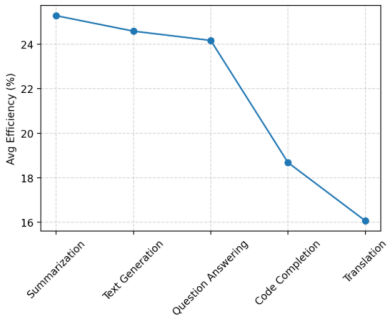
5.00 40.00

5.00 40.00

Selected Efficiency Range:

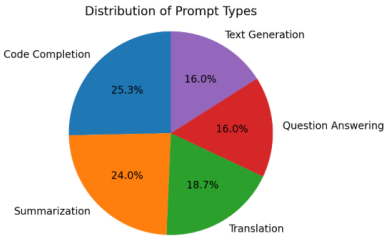
5% – 40%

Avg Efficiency Gain by Prompt Type



Detailed Summary: Efficiency Trend

Prompt Type Distribution



Detailed Summary: Prompt Types

Select AI Model

Logistic Regression

Select AI Tool

All

Prompt Type

All ×

Task Difficulty

All ×

Efficiency Gain (%) Range

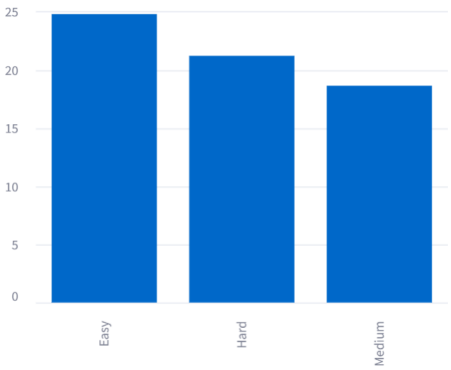
5.00 40.00

5.00 40.00

Selected Efficiency Range:

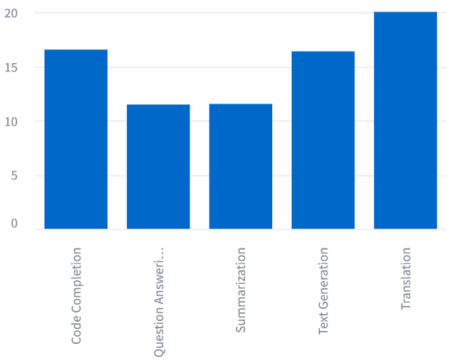
5% – 40%

Avg Efficiency by Task Difficulty



Detailed Summary: Efficiency by Difficulty

Avg Time Saved by Prompt Type



Detailed Summary: Time Saved by Prompt

💡 Key Insights Summary

- 🔝 Most efficient prompt: **Summarization** with **25.3%** improvement
- 🚀 Most used prompt type: **Code Completion**
- ⏱️ Highest time savings: **Translation** saves the most time
- 📦 Average efficiency gain: **21.6%**
- ⏳ Average time saved: **15.2 minutes**

> Use these insights to improve prompting strategies and choose the right AI tools.

📥 Download Filtered Data

Contact

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