(TR-103) PROMPT ENGINEERING –

Training Day 11 Report:

Notebook LM – Overview, Working, Purpose, and Demonstration

What is Notebook LM?

Notebook LM (Language Model) is an AI-powered notebook interface developed by Google. It allows users to upload content such as PDFs, Google Docs, or articles and then interact with that content through natural language prompts. Unlike general-purpose AI chatbots, Notebook LM focuses strictly on the uploaded documents, making it a personalized research assistant that can summarize, explain, and answer questions directly from the provided material.

How Does Notebook LM Work?

The workflow of Notebook LM involves:

- Users uploading files like PDFs or Google Docs.
- The system automatically scans and generates context from the documents.
- Extracting key points, sections, and summaries for easy navigation.
- Allowing users to ask contextual questions, with answers grounded strictly in the uploaded material.
- Ensuring responses are accurate and free from unrelated or hallucinated content.

Purpose of Using Notebook LM

Notebook LM serves multiple use cases across different domains:

- **Students:** Summarize chapters, generate study notes, and create quizzes.
- **Researchers:** Analyze academic papers, extract findings, or compare theories.
- **Professionals:** Automate policy or documentation review.
- **Creators:** Transform notes into structured outputs such as audio scripts or storyboards.

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Overall, it works as a knowledge assistant, making information more interactive and easier to consume.

Demonstration: Upload, Summarize, Ask & Audio Generation

a. Uploading PDFs

- Multiple PDFs were uploaded into Notebook LM.
- The system divided them into sections and highlighted important content.

b. Generating Context & Summaries

- The AI created section-wise summaries.
- Extracted main topics and generated highlights in bullet points.
- Output was structured, clear, and highly accurate.

c. Asking Contextual Questions

- Questions were asked such as:
    - "What are the main highlights of the paper?"
    - "Which Techniques were used during preprocessing?"
- Notebook LM gave direct answers with references from the uploaded text.

d. Audio Generation

- The system converted generated summaries and answers into speech.
- This feature allowed users to listen to notes instead of reading and use audio for learning or accessibility needs.
- It proved especially useful for auditory learners and on-the-go usage.

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