College Name: VIT Bhopal University
Student Name: Komal Tripathi

TEXT SUMMARIZER - GEN AI PROJECT PHASE 1 SUBMISSION DOCUMENT

Phase 1: Proposal & Idea Submission

1. Project Title:

AI-Based Text Summarization Using Pre-trained Transformers

2. Domain:

Generative AI | NLP | Text Summarization

3. Problem Statement:

Generating concise and coherent summaries from longer texts remains a key challenge in Natural Language Processing (NLP). Summarization aids in extracting essential information while reducing reading time. The project aims to build a Generative AI system that can efficiently summarize user-provided text using pre-trained models.

4. Proposed Solution:

This project will implement a text summarization model using HuggingFace's Transformers. The system:

- Takes a user-provided paragraph or blog as input.
- Uses a summarization model (BART-large-cnn) to generate a concise summary.
- Displays the summary inside an interactive widget.
- Can be extended to story summarization, blog summarization, or educational notes.

5. Objectives:

- To build a working prototype that summarizes text using a Gen AI model.
- To experiment with summarization models such as facebook/bart-large-cnn.
- To create a simple interactive interface using ipywidgets.

College Name: VIT Bhopal University
Student Name: Komal Tripathi

6. Expected Outcome:

- A functional NLP application that summarizes large text inputs accurately.
- An interactive Google Colab page where users can input a blog/text and get a summary.
- A clean and scrollable display box for outputs.

7. Tools & Technologies to be Used:

- Python (Primary programming language)
- Transformers Library (HuggingFace)
- facebook/bart-large-cnn pre-trained summarization model
- ipywidgets for the UI
- Google Colab environment

8. References:

- HuggingFace Transformers Documentation
- BART Model for Summarization (Facebook Research)
- NLP Applications for Text Summarization