### AI Feedback Generator For Development Teams Using Palm's Text-Bison-001

**Milestone 1: Project Initialization and Planning Phase**

The "Project Initialization and Planning Phase" marks the project's outset, defining goals, scope, and stakeholders. This crucial phase establishes project parameters, identifies key team members, allocates resources, and outlines a realistic timeline. It also involves risk assessment and mitigation planning. Successful initiation sets the foundation for a well-organized and efficiently executed machine learning project, ensuring clarity, alignment, and proactive measures for potential challenges.

**Project Initialization and Planning Phase Report:** [**Click here**](https://github.com/Nandha-06/Project-Insight-AI-Feedback-Generator-For-Development-Teams-Using-Palm-s-Text-Bison-001/tree/a85c942afba16a9e1b00e9bf45d71865b9ab4a39/Project%20Initialization%20and%20Planning%20phase)

### Activity 1: Define Problem Statement

Problem Statement: The current code review process challenges developers, impacting their productivity and overall satisfaction. Developers, particularly those working on large-scale projects, encounter hurdles such as inefficient review times and inconsistent feedback. These challenges lead to a less-than-optimal development experience, potentially affecting code quality and team morale. To enhance our development process and improve team productivity, we aim to address these pain points. By understanding developers' specific frustrations during the code review process and implementing solutions, we can create an efficient, user-friendly experience that aligns with our developers' expectations and fosters a positive relationship within our development team.

### Activity 2: Project Proposal (Proposed Solution)

The proposal report aims to transform the code review process using AI, boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations, reduced errors, and happier development teams. Key features include a machine learning-based feedback model and real-time feedback generation.

## Activity 3: Initial Project Planning

Initial Project Planning involves outlining key objectives, defining scope, and aiding developers by providing feedback on their projects. It encompasses setting timelines, allocating resources, and determining the overall project strategy. During this phase, the team establishes a clear understanding of the pre-trained dataset, formulates goals for analysis, and plans the workflow for data processing.

# Milestone 2: Data Collection and Preprocessing Phase

# Specifying the required libraries in the requirements.txt file ensures seamless setup and reproducibility of the project environment, making it easier for others to replicate the development environment.

# Data Collection and Preprocessing Phase Report: [Click here](https://github.com/Nandha-06/Project-Insight-AI-Feedback-Generator-For-Development-Teams-Using-Palm-s-Text-Bison-001/tree/a85c942afba16a9e1b00e9bf45d71865b9ab4a39/Data%20collection%20and%20Preprocessing%20phase)

## Activity 1: Requirements file

* + **Streamlit:**

Streamlit is an open-source Python framework used to create interactive and data-driven web applications quickly and easily. It allows developers to transform data scripts into shareable web apps without requiring extensive web development knowledge.

* + **Google-Generative AI:**

The Google Generative AI Library is a suite of tools and models designed to create and enhance AI-generated content using Google's state-of-the-art machine learning technologies. It provides APIs and frameworks for generating text, images, and other media, enabling developers to integrate advanced generative capabilities into their applications.

## Activity 2: Data Quality Report

The Data Quality Report will summarize data quality issues from the selected source, including severity levels and resolution plans. It will aid in systematically identifying and rectifying data discrepancies.

## Activity 3: Raw Data Sources And Data Quality Report:

## Elevating data strategy with the Data Collection plan and the Raw Data Sources report, ensuring meticulous data curation and integrity for informed decision-making in every analysis and decision-making endeavor.

# Milestone 3: Model Initialization and Interfacing

The Google API key is a secure access token provided by Google, enabling developers to authenticate and interact with various Google APIs. It acts as a form of identification, allowing users to access specific Google services and resources. This key plays a crucial role in authorizing and securing API requests, ensuring that only authorized users can access and utilize Google's services. For initializing the model we need to generate PALM API.

# Model Initialization and Interfacing Report: [Click here](https://github.com/Nandha-06/Project-Insight-AI-Feedback-Generator-For-Development-Teams-Using-Palm-s-Text-Bison-001/tree/a85c942afba16a9e1b00e9bf45d71865b9ab4a39/Model%20Initialization%20and%20Interfacing)

## Activity 1: Feature Selection

## **In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.**

## Activity 2: Initial Model Training Code, Model Validation and Evaluation

## In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection****.****

# Milestone 4: Model Deployment

In this milestone, we are deploying the created model using streamlit. Model deployment using Streamlit involves creating a user-friendly web interface for deploying machine learning models, enabling users to interact with the model through a browser. Streamlit provides easy-to-use tools for developing and deploying data-driven applications, allowing for seamless integration of machine learning models into web-based applications.

**Model Deployment Report:** [**Click here**](https://github.com/Nandha-06/Project-Insight-AI-Feedback-Generator-For-Development-Teams-Using-Palm-s-Text-Bison-001/tree/a85c942afba16a9e1b00e9bf45d71865b9ab4a39/Model%20deployment)

## Activity 1: The Project Title, Description and Description of Scenarios:

## The Project Title serves as a concise and descriptive name that encapsulates the project's essence and objectives. The Project Description provides a brief overview of the project's goals, key features, and intended outcomes, offering a clear understanding of its purpose and value. The Description of Scenarios includes detailed narratives of specific use cases or situations where the project can be applied, illustrating its real-world functionalities, benefits, and potential impact on users or processes.

**Activity 2: Create Fields for User to Input Data:**

To collect detailed project information from users, including project descriptions, scenarios, and code, through a user-friendly web interface using Streamlit, a popular framework for building interactive web applications in Python.

## Activity 3: Create Fields for User to Input Data For Generating Cover Letter:

## To generate a cover letter, create fields for the user to input essential data such as their name, contact information, the company's name, the job title, and a brief description of their qualifications and experiences relevant to the position. These inputs will help tailor the cover letter to the specific job application, ensuring it is personalized and targeted.

**Activity 4:** **Generate Feedback**

To generate feedback for improving the cover letter generation process, focus on ensuring user inputs are clear and comprehensive. Users should be prompted to provide their name, contact information, company name, job title, and a summary of their relevant qualifications and experiences. Incorporating these details will help create a personalized and effective cover letter tailored to the job application. Additionally, implementing validation checks to ensure all fields are completed can enhance the user experience and the quality of the generated cover letters.

**Activity 5: Run The Web Application:**

To run the web application of the AI Feedback Generator for Developers, create a user interface with fields for inputting the project description, scenarios, and code snippets. Use Streamlit to set up the application, allowing developers to enter their project details and receive detailed AI-generated feedback. This tool leverages advanced AI models to analyze and provide insights, helping developers improve code quality, project planning, and continuous learning.

# Milestone 5: Project Files Submission

For project file submission in Github, Kindly click the link and refer to the flow. [Click here](https://github.com/Nandha-06/Project-Insight-AI-Feedback-Generator-For-Development-Teams-Using-Palm-s-Text-Bison-001/blob/a85c942afba16a9e1b00e9bf45d71865b9ab4a39/app.py)