**Project Initialization and Planning Phase**

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| Date | 12 July 2024 |
| Team ID | xxxxxx |
| Project Title | Nutrition App Using Gemini Pro : Your Comprehensive Guide To Healthy Eating And Well-Being |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) template**

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

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| **Project Overview** | |
| Objective | The primary objective of this project is to develop a comprehensive AI-powered nutritionist application that assists users in managing their dietary and health goals effectively. |
| Scope | The project will encompass the development of a web-based application that allows users to log their meals, receive nutritional insights, and generate personalized meal plans based on their dietary preferences and health goals. |
| **Problem Statement** | |
| Description | Many individuals struggle with maintaining a balanced diet tailored to their specific health objectives, such as weight loss, diabetes management, or muscle building. There is a need for a user-friendly tool that provides accurate nutritional guidance and meal planning tailored to individual preferences. |
| Impact | Addressing this problem will empower users to make informed dietary decisions, leading to improved health outcomes and a better quality of life. By offering personalized nutrition advice and meal plans, the application aims to promote healthier eating habits and simplify the process of achieving dietary goals. |
| **Proposed Solution** | |
| Approach | The application will leverage AI and machine learning techniques to analyze user-inputted meal data, providing real-time feedback on nutritional content and meal appropriateness. Natural language processing (NLP) will be employed to interpret user preferences and dietary restrictions accurately. |
| Key Features | - Registration and Authentication: Users can register and log in securely.  - Meal Logging: Users can log meals by uploading photos or scanning barcodes.  - Nutritional Analysis: The application will calculate total calories, macronutrient breakdowns, and suggest adjustments.  - Meal Planning: Personalized meal plans will be generated based on user preferences, including vegetarian, low-carb, or high-protein options.  - Fitness Integration: Integration with fitness trackers to provide holistic health insights. |

**Resource Requirements**

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| **Resource Type** | **Description** | **Specification/Allocation** |
| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | 2 x NVIDIA V100 GPUs |
| Memory | RAM specifications | 16 GB |
| Storage | Disk space for data, models, and logs | 1 TB SSD |
| **Software** | | |
| Frameworks | Python frameworks | TensorFlow/Keras |
| Libraries | Additional libraries | scikit-learn, pandas, numpy, Streamlit |
| Development Environment | IDE, version control | Jupyter Notebook, Git |
| **Data** | | |
| Data | Source, size, format | Kaggle dataset, 10,000 meal images |