**Project Initialization and Planning Phase**

| Date | July 2024 |
| --- | --- |
| Team ID | Team-739777 |
| Project Title | Cereal analysis based on ratings by using mechine learing techniqes |
| 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.

| **Project Overview** | |
| --- | --- |
| Objective | collect and preprocess data on various cereal brands,to identify the key features that impact cereal ratings,to develop, train, and optimize machine learning models for predicting cereal ratings,to interpret model results and provide actionable insights for cereal manufacturers. |
| Scope | Analysis of cereal ratings from multiple sources,Examination of various cereal attributes such as taste, nutrition, ingredients, price, and brand, Use of statistical and machine learning techniques for analysis and prediction. |
| **Problem Statement** | |
| Description | Despite the abundance of consumer ratings and reviews available online, cereal manufacturers lack a comprehensive understanding of the key factors influencing consumer satisfaction and preferences. can guide product development, marketing strategies, and customer satisfaction initiatives for cereal manufacturers. |
| Impact | impact on various stakeholders within the breakfast cereal industry, including manufacturers, retailers, and consumers. By leveraging consumer ratings and reviews to gain deeper insights into consumer preferences, the project has the potential to drive improvements in product offerings, marketing strategies, and overall consumer satisfaction. |
| **Proposed Solution** | |
| Approach | Gather data from reputable sources including online retail platforms, consumer review websites, nutritional databases, and manufacturer information. |
| Key Features | Efficiently gather and integrate data from various sources such as historical shipping records, weather forecasts, port congestion data, and vessel tracking information. |

**Resource Requirements**

| **Resource Type** | **Description** | **Specification/Allocation** |
| --- | --- | --- |
| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | e.g., 2 x NVIDIA V100 GPUs |
| Memory | RAM specifications | e.g., 8 GB |
| Storage | Disk space for data, models, and logs | e.g., 1 TB SSD |
| **Software** | | |
| Frameworks | Python frameworks | e.g., Flask |
| Libraries | Additional libraries | e.g., tensorflow |
| Development Environment | IDE, version control | e.g., Jupyter Notebook, Git |
| **Data** | | |
| Data | Source, size, format | e.g., Kaggle dataset, 10,000 images |