Project Initialization and Planning Phase

Date	20 June 2024
Team ID	739954
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