Project Initialization and Planning Phase

Date	10 July 2024
Team ID	739709
Project Title	To Predict Consumer Price Index
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The proposal report aims to transform loan approval using machine learning, boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations, reduced risks, and happier customers. Key features include a machine learning-based credit model and real-time decision-making.

Project Overview	
Objective	The objective of predicting the Consumer Price Index (CPI) is to forecast the future changes in the overall prices of goods and services that consumer purchase thereby providing valuable insights for various Stakeholders
Scope	The Scope of the predicting the Consumer Price Index is multifaceted and crucial for understanding economic trends and making informed decisions across various sectors. At its core, CPI prediction involves collecting and analyzing a wide array of economic data, including inflation rates, interest rates, unemployment figures, GDP growth, consumer spending patterns, and commodity prices.
Problem Statement	
Description	Predicting the Consumer Price Index (CPI) involves utilizing statistical methods or machine learning algorithms to forecast future changes in the cost of goods and services consumed by households.
Impact	The impact of predicting the CPI extends beyond economic indicators to encompass broader implications for policy formulation, financial decision-making, consumer welfare, and societal well-being. By providing foresight into future inflation trends, CPI predictions play a vital role in shaping economic policies, business strategies, and individual financial planning efforts.

Proposed Solution	
Approach	Predicting the Consumer Price Index (CPI) typically involves a systematic approach that integrates data collection, preprocessing, model selection, evaluation, and interpretation. The process begins with gathering a comprehensive dataset comprising historical CPI values and a range of economic indicators such as inflation rates, interest rates, unemployment figures, and other relevant factors influencing consumer prices.

Key Features	- Implementation of a machine learning-based on Consumer Price Index(CPI)

	Key Features commonly used in these models -Food -Transportation -Education -Alcoholic beverges -Tobbaco products

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy, matplotlib, seaborn
Development Environment	IDE	Jupyter Notebook, pycharm
Data		
Data	Source, size, format	Kaggle dataset, 614, csv UCI dataset, 690, csv