Project Initialization and Planning Phase

Date	16 June 2025
Team ID	178047
Project Title	Unemployed Insurance Beneficiary Forecasting
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	To increase the efficiency of unemployment insurance benefit handouts using machine learning to detect various trends such as demographic and economic situation that can be used to predict the volume of requests. To be delivered to government agencies, research and insurance companies.
Scope	This project analyzes different trends in unemployment benefit insurance and optimizes the process according to the needs of various customers.
Problem Statement	
Description	Increasing efficiency in the unemployed benefits resource allocation, according to the demands of the client.
Impact	This project will help allocate resources with greater efficiency as it studies various trends in the past and uses the data analyzed, to optimize the handouts process with optimal risk management and better output.
Proposed Solution	
Approach	Studying past trends in the field to predict future demands, hence providing optimal solutions to the resource allocation process and reducing inefficiency.
Key Features	Machine learning based model that helps predict demand for unemployment insurance based on various factors, determined by analyzing old data.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU	Intel i5/i7 or equivalent, 4-8 cores
Memory	RAM	8-16 GB RAM
Storage	Disk space	20 GB SSD (to store datasets, models, and logs)
Software		
Programming Language	Python	Version 3.7 or higher
Frameworks	Application development	Flask
Libraries	Data processing & modeling	pandas, numpy, matplotlib, seaborn, plotly, statsmodels, prophet, scikit-learn
Development Environment	IDE and version control	Google Colab, VS code, Git
Data		
Data	Source and format	NY State Open Data Portal, CSV format, ~14,000 rows, ~2 MB
Access Permissions	Data availability	Publicly accessible