Project Initialization and Planning Phase

Date	July 5, 2024
Team ID	739892
Project Title	Customer segmentation using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

Customer Segmentation using Machine Learning is a strategic approach to dividing a customer base into distinct groups based on shared characteristics, behaviors, and preferences. By leveraging machine learning algorithms and customer data, this project aims to uncover meaningful insights and create targeted marketing strategies, personalized offerings, and improved customer experiences.

Project Overview	
Objective	Customer segmentation is a group of business customer base called customer segment such that each customer segment has customers who share the same market characteristics
Scope	This project enables the learner to understand the business use case of how and why to segment the customers.
Problem Statement	
Description	Our company faces challenges in effectively targeting and retaining customers due to a lack of personalized marketing strategies.
Impact	Implement a robust customer segmentation strategy to enhance marketing effectiveness, improve customer satisfaction, and drive business growth.
Proposed Solution	
Approach	By utilizing the advanced analytics tools to analyze and segment customer data effectively.
Key Features	-businesses can improve customer satisfaction and loyalty. -Segmentation provides insights into customer preferences and

	demands, aiding in the development of new products or customization of existing offerings. -enables businesses to differentiate themselves from competitors by offering unique value

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, seaborn, matplotlib
Development Environment	IDE, version control	Jupyter Notebook, VS code
Data		
Data	Source, size, format	Kaggle dataset, 614, csv