Project Design Phase-I
Proposed Solution Template

Date	21 October 2023
Team ID	592694
Project Name	Project - Car Purchase Prediction.
Maximum Marks	2 Marks

Team Member Name:

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Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In the context of consumer vehicle financing, it is imperative to ascertain an individual's financial capacity to acquire an automobile. By harnessing pertinent attributes, we endeavour to craft a predictive model that effectively categorises individuals into two distinct groups: those with the financial means to procure a car and those without. This predictive model seeks to empower decision-makers with a data-driven tool for assessing car affordability, thereby enhancing the precision and soundness of such financial evaluations. This solution addresses the critical need to provide a reliable means of evaluating car affordability, ensuring that potential buyers can make well-informed decisions about their vehicle purchases.
2.	Idea / Solution description	The solution is an innovative machine learning model that uses customer data, including age, income, to predict the likelihood of a customer

		making a car purchase. The model utilises Support Vector Machine Classifier and thorough data preprocessing to achieve high predictive accuracy. It is seamlessly integrated into a user-friendly interface where users can input their demographics and receive precise purchase likelihoods. This empowers potential buyers by offering insights to make informed choices and assists in dealership targeting for tailored marketing strategies.
3.	Novelty / Uniqueness	This solution stands out due to its simplicity, precision, and personalised approach. It offers an easy-to-use tool for assessing car affordability, categorising individuals based on their financial capacity. Additionally, it goes a step further by predicting the type of car a person can purchase, considering attributes such as gender, annual salary, age, and user identification. This innovative approach streamlines decision-making, providing users with tailored insights for well-informed choices.
4.	Social Impact / Customer Satisfaction	The social impact of this solution is significant. It enhances customer satisfaction by providing potential car buyers with the confidence to make informed choices. Customers can explore their likelihood of making a purchase and can better understand their financial capabilities. Additionally, it benefits businesses by optimising their marketing strategies, reducing resource wastage, and improving overall efficiency. This application of ML-driven data insights has the potential to reshape the automotive industry by enhancing customer experiences and optimising business operations.
5.	Business Model (Revenue Model)	The revenue model can be based on subscription fees or a pay-per-use system. Alternatively, businesses could pay to integrate this model into their marketing strategies. Additional revenue streams could be generated through partnerships with dealerships and

		manufacturers for targeted advertising and lead generation.
6.	Scalability of the Solution	The solution has good scalability potential. It can be easily extended to cover other industries or products beyond cars. The core machine learning model can be fine-tuned for different applications, making it adaptable to various businesses. As more data is collected, the model's accuracy and effectiveness can improve over time. The user-friendly interface can also be scaled up to accommodate a larger user base as needed, ensuring its widespread adoption.