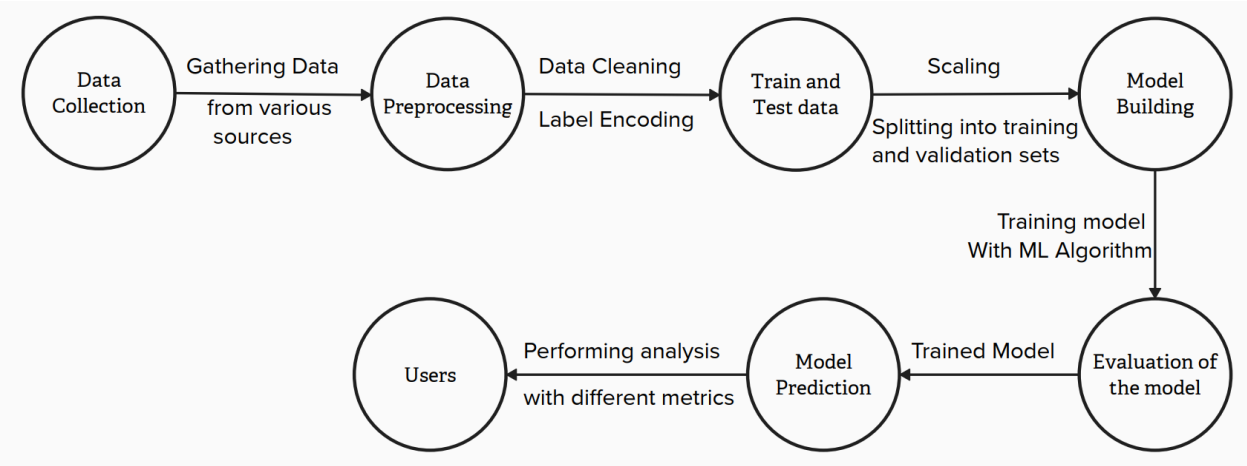
Project Design Phase-I

Data Flow Diagram

Date	23 October 2023
Team ID	SPSGP-600765
Project Name	Car purchase Prediction Using ML
Maximum Marks	4 Marks

Data Flow Diagram



User Stories

User type	Functional Requirement	User Story Number	User story/task	Acceptance criteria	Priority	Release
Car Salesperson	Project setup & infrastructure	USN -1	Set up the development environment with the required tools and frameworks to start the car purchase prediction project.	Succesfully configured with all necessary tools and frame works.	High	Sprint 1
Car	Development	USN-2	Gather a diverse dataset of data for	Gathered a	High	Sprint 1

Dealership	environment		training the machine learning model.	diverse dataset of data depicting various factors such as age,income etc..		
Car Buyers	Data collection	USN-3	Preprocess the collected dataset by cleaning the data,label encoding and splitting it into training and validation sets.	Preprocessed the dataset	High	Sprint 2
Researchers and Academics	Data preprocessing	USN-4	Explore and evaluate different machine learning architectures (e.g., Linear regression) to select the most suitable model for car purchase prediction.	We could explore various ML models	High	Sprint 2
System administrator	Model development	USN-5	Train the selected machine learning model using the preprocessed dataset and monitor its performance on the validation set.	We could do validation	High	Sprint 3
Educational Institutions	Training	USN-6	Implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy.	We could do testing.	Medium	Sprint 3
	Model Deployment & Integration	USN-7	Deploy the trained machine learning model as an API or web service to make it accessible for car purchase prediction. Integrate the model's API into a user-friendly web interface for users to input their data and check for the car purchase prediction results.	We could check the scalability	Medium	Sprint 4
	Testing & quality assurance	USN-8	Conduct thorough testing of the model and web interface to identify and report any issues or bugs. Fine-tune the model	We could create web application	Medium	

			hyperparameters and optimize its performance based on user feedback and testing results.			