* **Project's goals**

Design and develop an AI assistant for selecting pre-owned cars based on user requirements. Here the AI assistant is supposed to interact with the user in natural language asking users for their preferences for buying the pre-owned car. Based on the users requirements, AI assistant should shortlist a few cars and showcase them to the user, ultimately prompting them towards making a purchase.

* **AI model used**
  + OpenAI’s **gpt-3.5-turbo**
  + openai python APIs for chatCompletion and moderation
* **Data sources**
  + Used cars databased from Kaggle <https://www.kaggle.com/datasets/ayushparwal2026/cars-dataset>
* **Key design decisions**
  + Use of pandas for handling the datasets
  + Use of openAI APIs for handling conversations and moderation
  + Identify a subset of features for short-listing the car. E.g. price range, brand, fuel type, transmission, etc.
  + The prompt is designed to ask questions one by one and build a machine-readable python dictionary as output
  + Use of thought chain or flowchart as part of initial prompt to decide if we have enough data gathered
  + openAI generates machine readable dictionary as part of the first prompt, so we did not need another prompt to extract the dictionary. Simple string based parsing did the job.
* **Challenges faced.**
  + Understanding the API changes from the reference code wrt to the latest model supported by openAI
  + Writing the system message prompt and fine tuning it to get the required results
  + Anticipating user actions while writing the prompt to handle various scenarios
  + Printing the conversation array which is mix of dictionaries and openAI class objects. Used simpleNameSpace to solve this challenge

- This data set contains the information of pre-owned cars in India.

- Each row in the data set describes various attributes of the car.

- This assistant AI can be used for platforms like cars24, OLX, CarDekho, Quikr.

- Used Car assistant AI will help user in selecting a used car on the basis of following 6 parameters.

- Brand

- Location

- Fuel\_type (Diesel, Petrol, Electric)

- Transmission (Manual, Automatic)

- Owner\_Type (First, Second, Third, Forth, Fifth)

- Price

- Assistant AI will gather the user requirements for above 6 parameters, and help user in selecting an appropriate used car.

- If there is no car which fulfill user's requirements, then assistant AI will print the message that connecting user to human assistant expert for further help.