Contributions

1. **Nisarg Patel (201801013)**

    - Backend development & Integration :
      We have used Django for backend and frontend integration. It provides a systematic framework for different modules and allows easy routing which helps locating errors. It also allows us to use modules for faster development. Configured various modules to integrate the pages, model, image database. Implemented functionalities of predicting image for home page,filter options of cars for filter page and contact us page.

    - Designing Schema & creating database :
      The database is created in Postgres and is then integrated with our project.

    - Image dataset integration :
      Backend for image dataset processing and its integration with the product where the file path of images were stored in postgres.

    - Website Hosting:
      Hosted the final version of the website on heroku with model and database on AWS.

2. **Khyati Bhuva (201801119):** As a group leader, I had responsibility to arrange meetings, decide agendas of meetings, be in constant contact and act as a point of contact with all teams and also note their problems and solve their problems, review all documents before submission etc. Most important responsibility was to create a productive and positive working environment with maintaining teamspirit and unity and to make sure that everyone is on the same page. As a member, I had contributed the following:

    - Compare page:
      Frontend development of Compare Page was done , this page compares two cars so that a user can differentiate between cars and make a correct choice.

    - Contact us page :
      Worked on the frontend development of CONTACT US page ,in this page the user can provide the feedback about the website.

- Image database :
  Typically we found out suitable image for the assigned cars and resized them accordingly

3. **Palak Verma (201801161)**

- Filter page :
  Frontend development of FILTER PAGE was done ,this page basically aims to find a suitable car for a user according to his/her requirements.This contains filters by “price”,”brand”,”type”, ”seater”, ”fuel”, ”gear”. When the user states the requirements we give the suitable cars and their specifications.

- Image database :
  Typically we found a suitable image for the assigned cars and resized them accordingly.

- Front end development :
  Navigation bar where four tabs to go on respective pages is shown along with college name and project title.

4. **Swapnil Dhola (201801163)**

- Model designing and development :
  We have done designing and development of models using transfer learning techniques. We have used mobilenet architecture and VGG architecture to develop image detection models for car detection.

- Data Augmentation and data preparation :
  Preparation of image dataset for training and testing. Since the data is not enough for testing and training I have done data augmentation to get more data for the image dataset.

- Evaluation :
  Final evaluation of model. Testing of How much accuracy model is giving and how the model is working for different classes. I have also done blackbox testing and static analysis for codes.

5. **Deep Malani (201801184)**

- Home Page :
  Frontend development of HOME PAGE was done, it basically consists of a "upload image" button which inputs the image of car and recognizes the car and gives the specifications of the same also gives the recommendations of cars which are related to the car uploaded .To add elegance to the page i have used the parallax scroll feature where the background content (i.e. an image) is moved at a different speed than the foreground content while scrolling.

- Image database :
  Typically we found out suitable images for the assigned cars and resized them accordingly.

- Logo:
  As we also wanted to incorporate the logo in our navigation bar, we had to resize while maintaining the aspect ratio. The image pixels also have to match with the padding of other elements and height of the bar.

6. **Siddharth Chauhan (201801196)**
   - Model designing and development :
     Designing the model and developing the model using transfer learning techniques. Developed model using mobilenet and VGG architecture.

   - Model Improvement :
     Improving the model using different hyperparameters and different learning methods. Using proper hyperparameters to tune the model and improve the accuracy of the model.

   - Model validation :
     Validating the model with techniques like feature extraction. Whether or not the model we are using is learning.

   - Image database:
     Typically we found out suitable image for the assigned cars and resized them accordingly
7. **Ajay Vala (201801414)**

   - Backend development & Integration:
     We have used Django for backend and frontend integration. Integration of the backend with the database for the COMPARE page functionality.
     I have tried to incorporate search as well as compare features into the same page.

- Data set refinement:
  Data aggregation and formatting car data in the manner desired by the integration team.

- Database validation:
  Checking and ensuring accuracy and the consistency of the database.

8. **Mohil Khimani (201801416)**

- Car database :
  Since the car dataset was not available, me and Vishal did the task of manually making the dataset by searching details for the individual cars like features, pricing, manufacturing details, etc and integrating it into a dataset. The dataset had to be formatted through various stages of changes according to the requirements of the backend team for the query running process.

- Image database :
  For the filter page, we required photos of the cars for showing results after filtering according to the user's needs. Thus, for that purpose, we collected relevant images of the cars and resized them according to requirements from the frontend team.

9. **Shabbir Murtaza (201801428)**

- Recommendation Functionality:
  Worked in the integration part of frontend with the database for creating recommendations giving the closest possible car to the predicted car. The prediction is based on price as we thought this was the best parameter for this. I implemented the algorithm using django query sets.

- Routing the frontend pages to the expected functionality.

- Final integration: Connected the static frontend pages using jinja to the backend python code. The frontend pages can then display the results returned from python code making it dynamic.

10. **Vishal Patel(201801436)**

- Since the car dataset was not available, me and Mohil manually searched for individual cars and collected the details like Price, Engine Power, Type, Number of seats, Fuel type for the required dataset in the product. The datasets we created had gone through various stages of formatting and corrections according to the requirements of the backend team.

- Firestore Database:
  I have created a firestore database in the firebase which stores the database in the json tree format and tried to run a few queries for the same. The database I created was a NoSql database but the backend team found some difficulties in integrating it with our product so the backend team has created the Sql database.

- Image Database:
  We found some suitable images and resized them according to required specifications for the models included in our product for the image database.
