



SMOKY CARS ANALYSER

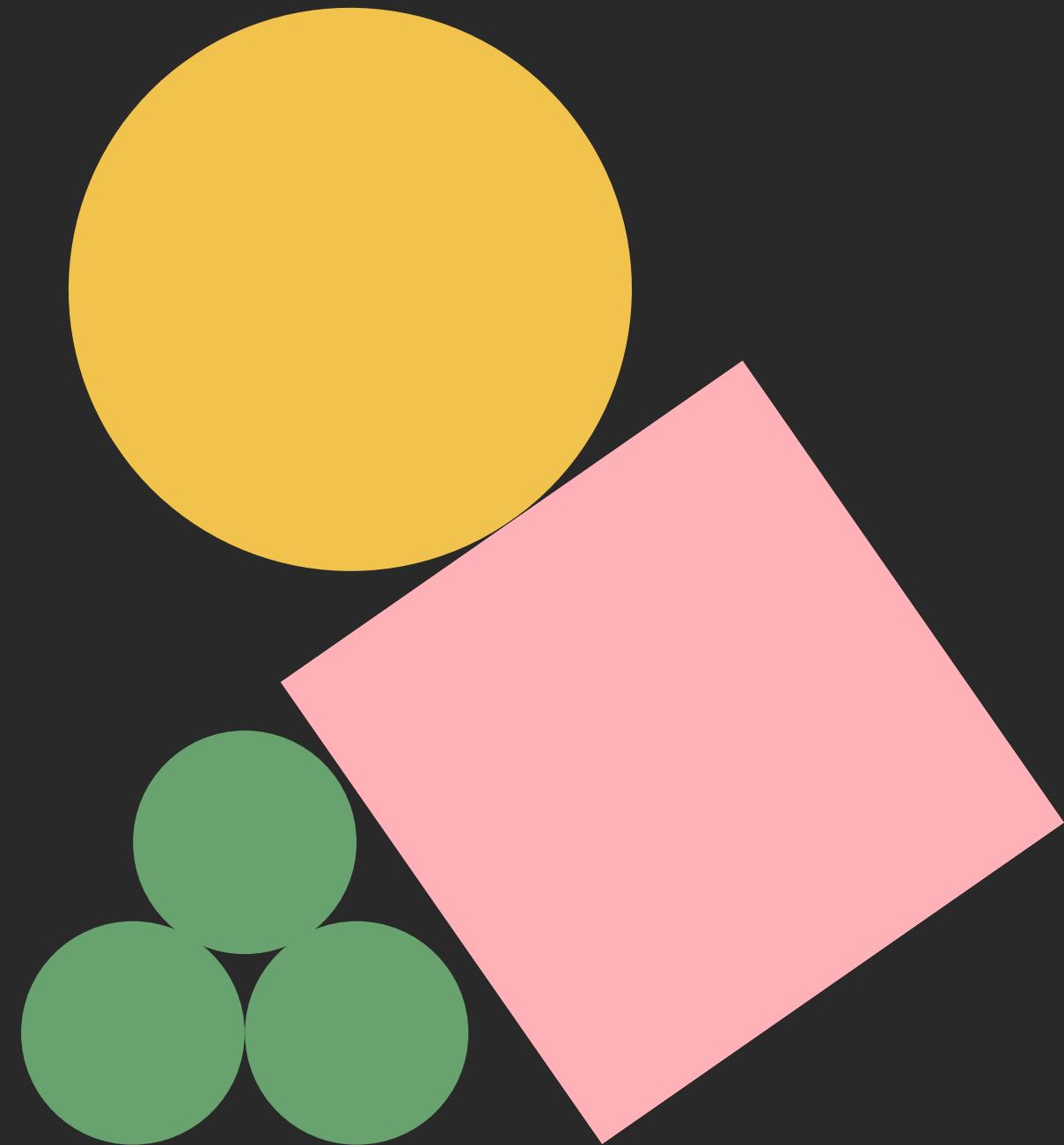
Smoky Cars Analyzer is an interface built with glass morphism, react and uses machine learning. It can predict the carbon emissions of cars



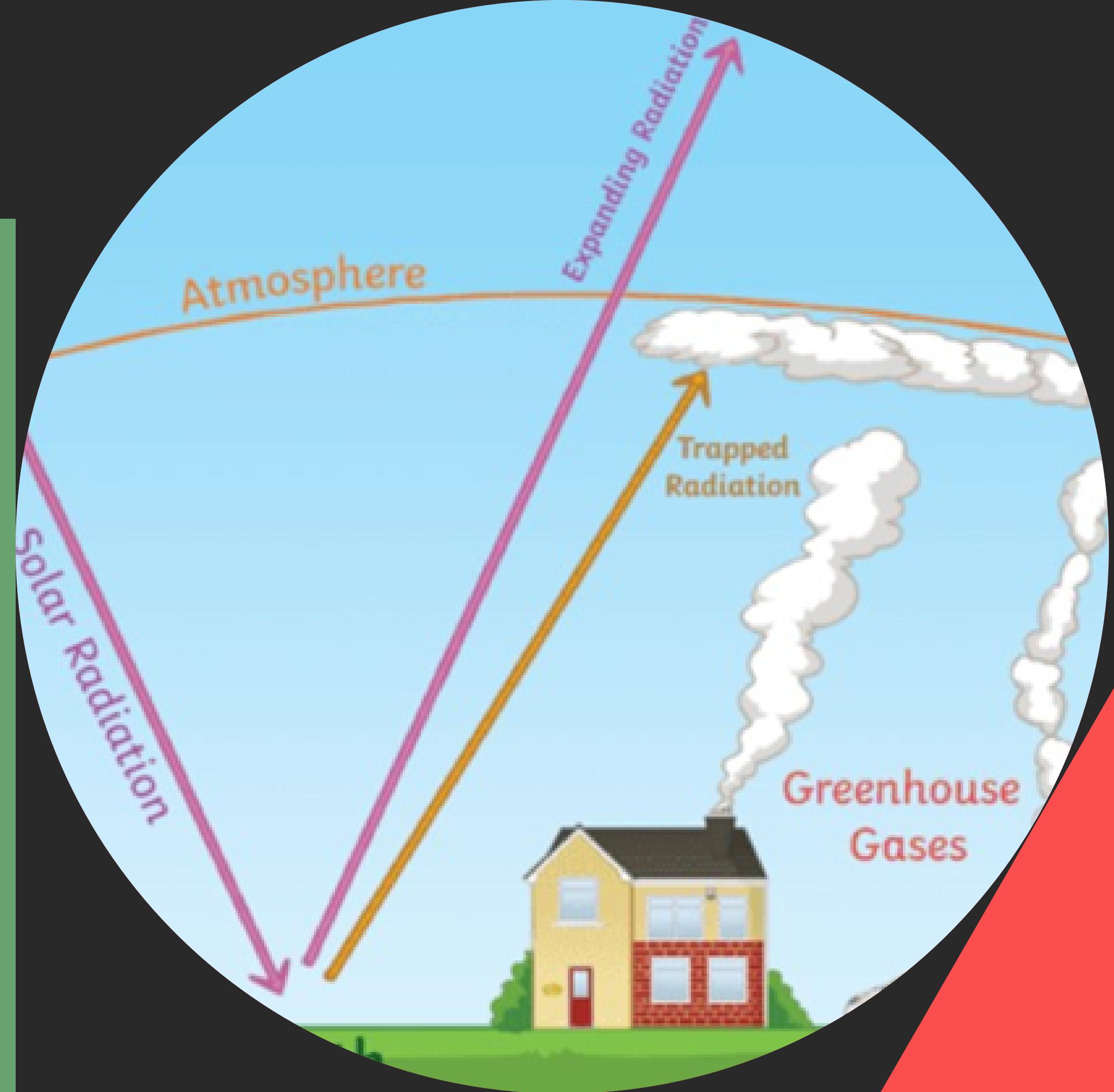
TEAM

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CO₂ EMISSION AN ENVIRONMENTAL ISSUE



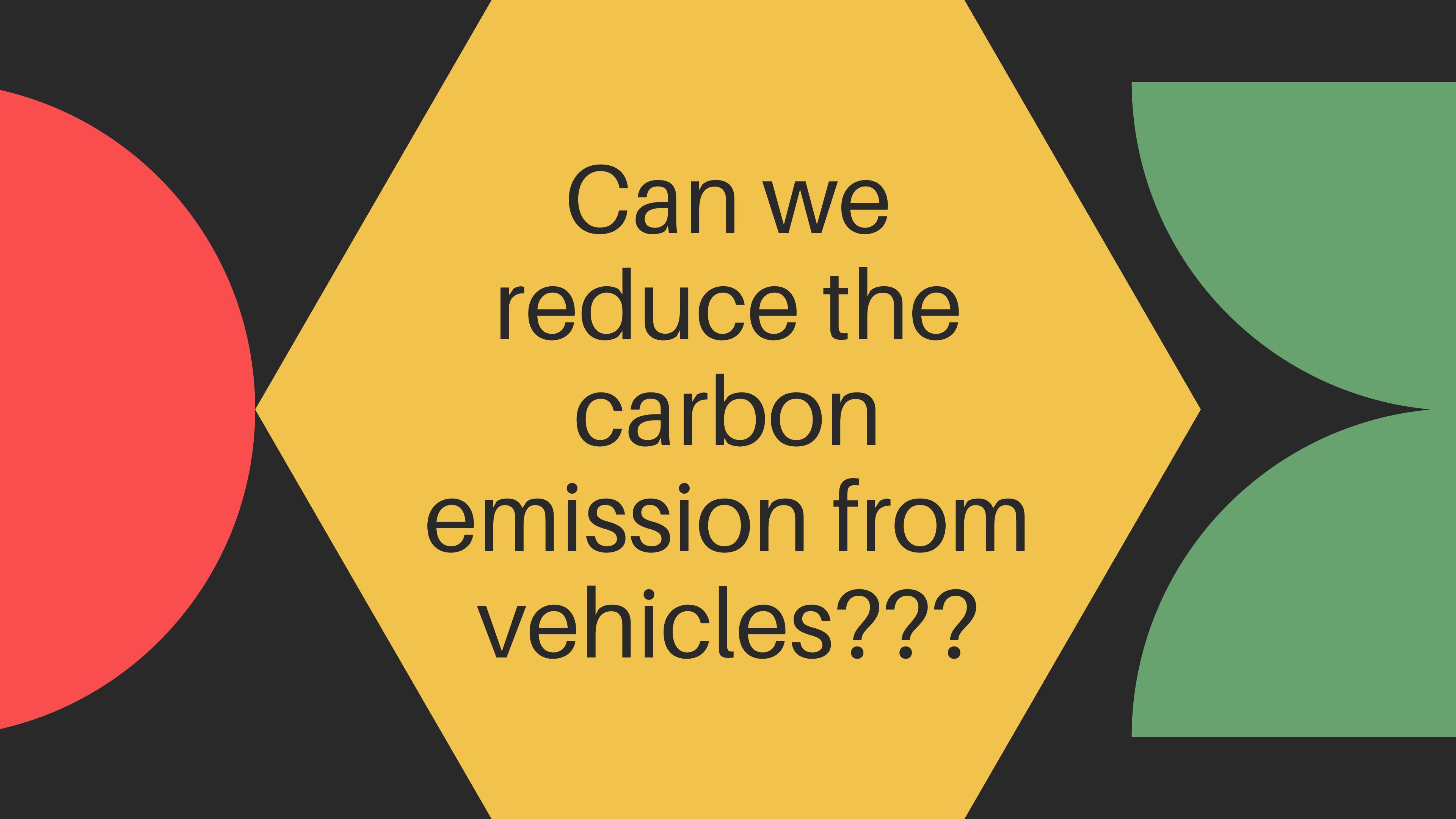
- Gases that trap heat in the atmosphere are called *greenhouse gases*.
- Carbon dioxide, methane, nitrous oxide, fluorinated gases, etc. are some of the green house gases. These gases causes the climate change, increases the surface temperatures and leads to global warming.
- Carbon dioxide is the primary green house gas emitted and accounted for **79%** of all green house gases. It enters into the atmosphere through burning fossil fuels (like coal, natural gas and oil), trees, solid wastes and other biological materials.
- Deforestation accounts for about **20%** of the CO₂ increase from human activities.





Co₂ emission from Vehicles

- Our personal vehicles are the major cause of *carbon emission*.
- There are over **600** million motor vehicles in the world today.
- Burning one gallon of gasoline generates **22** pounds of Carbon Dioxide. When gasoline is burned, the carbon in it is combined with the atmospheric oxygen to form Carbon dioxide.
- If present trend continues, the number of cars on Earth will be doubled in next 30 years.
- This increases the amount of CO₂ in the atmosphere, which results in increase of surface temperatures of the Earth, which in turn leads to melting of polar ice caps, which effects the habitat of polar animals.
- Melting of ice caps increases the mean sea level, which can lead to submerging of many coastal areas in the world.



Can we
reduce the
carbon
emission from
vehicles???

SOLUTION!!!



- Yes, we can find a way to reduce the carbon emission from vehicles into the atmosphere by minimizing the use of personal vehicles and preferring public transport.
- The increase in carbon dioxide content in the atmosphere, increase the surface temperature which cause polar caps to melt and making it hard for polar animals to survive.
- We collected the data from an open source website regarding the four wheeler vehicles which are being used in Canada.

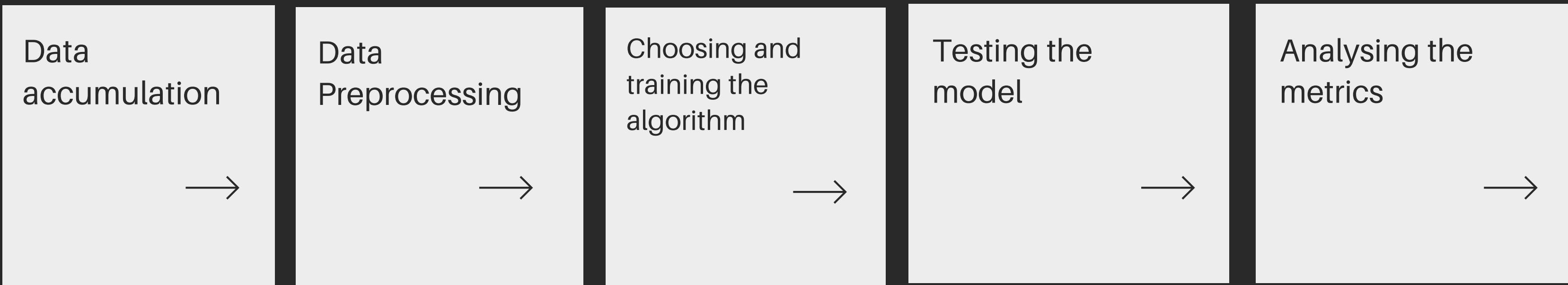
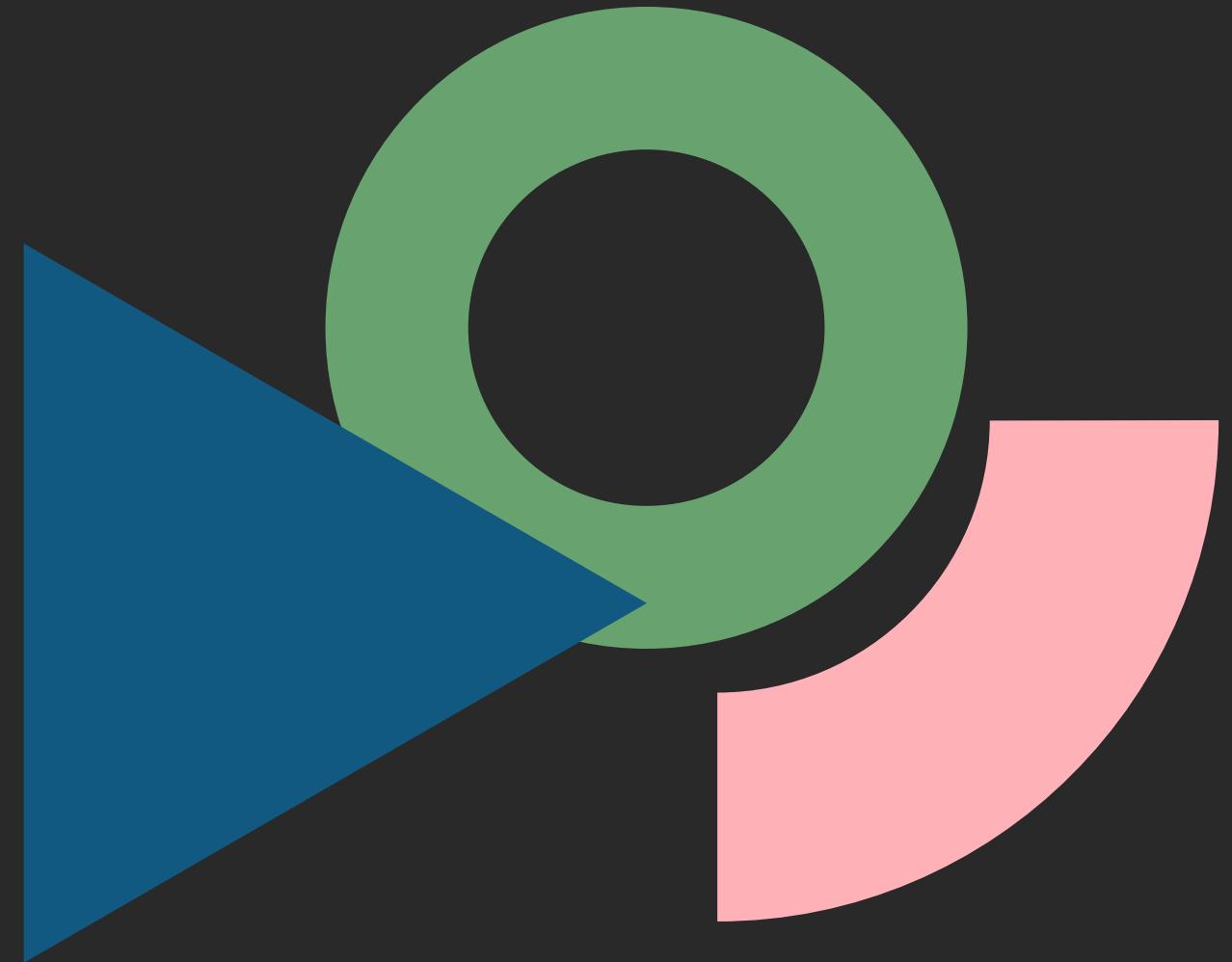
PROJECT THEME



- ***Why we choose this "Canada dataset"???***
- As we all know that, Canada is located close to polar regions, so the increase in carbon emissions into the atmosphere can impact the climatic conditions in the Arctic region.
- We have analysed the dataset of cars which are being used in Canada.
- An approach for predicting the CO₂ emissions from four wheeler vehicles(i.e. cars) which are being used in Canada.
- The amount of carbon emission from a car mainly depends on the model/type of the car, type of fuel used, mileage of the car and carbon emission per kilometre.
- We categorize the cars into two classes:
 - >>Car is in good state (i.e. carbon emission is less)
 - >>Car cannot be used further(i.e. carbon emission exceeded its limit).

Project Outline

Steps followed in building our project



METHODOLOGY

>>Data acquistion:

- The data was collected from an open source website to build our project.
- Our dataset has nearly 7400 records and 14 columns of data regarding the cars which are being used in Canada.
- Dataset contains the information of manufacturer of the car, type/model of the car, type of fuel used, mileage and carbon emission per kilometer.
- The collected is then processed before the model is trained and tested on it.



>>IMPLEMENTING A MULTIPLE LINEAR REGRESSION MODEL:

- For building up the model to estimate the carbon emission from the car, we chosen regression model.
- The model is built by training and testing the model on the dataset.



>>TRAINING AND TESTING DATASET:

- Training dataset contains the known outputs from where the machine is trained to learn.
- Testing dataset is used to test the model, the model predicts the output based on what it learned.
- This helps in evaluating the performance of the model, and can take necessary steps to improve its accuracy.

>>TRAINING THE MODEL:

- Training a model is simply making it to learn from the resources/inputs and to provide the correct output.
- The main aim of training a model is to minimize the loss, and to find the optimal setting of the model to give the accurate results.

>>TESTING THE MODEL:

- Testing the model, makes model to predict the output from what it learned. We can evaluate the performance and accuracy of the model.
- It helps in making prominent changes in the design of the model to improve its accuracy furtherly.

