

# Prediction of CO<sub>2</sub> Emissions by Country using IBM Watson Studio

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# INTRODUCTION



- Carbon emissions and environmental protection issues have brought pressure from the International community during Chinese Economic Development
- Recently, the Chinese Govt. announced that carbon emissions per unit of GDP would fall by 60-65% compared with 2005 and non-fossil fuel energy would account for 20% of primary energy consumption by 2030.
- Hence, forecasting energy consumption is significant to emissions reduction and upgrading energy supply in the Beijing-Tianjin-Hebei region. This study thoroughly analyzes carbon emissions' main energy sources, including coal, petrol, natural gas, and coal power in this region.



# CAUSES OF CO<sub>2</sub> EMISSIONS

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- Due to human activities, the atmospheric concentration of CO<sub>2</sub> has been rising extensively since the Industrial Revolution and has now reached dangerous levels not seen in the last 3 million years.
- Natural sinks remove around the same quantity of CO<sub>2</sub> from the atmosphere that are produced by natural sources. This had kept CO<sub>2</sub> levels balanced and in a safe range.
- Human sources of CO<sub>2</sub> emissions are much smaller than natural emissions but they have upset the natural balance that existed for many years before the influence of humans by adding extra CO<sub>2</sub> to the atmosphere without removing any.

# PROBLEM STATEMENT

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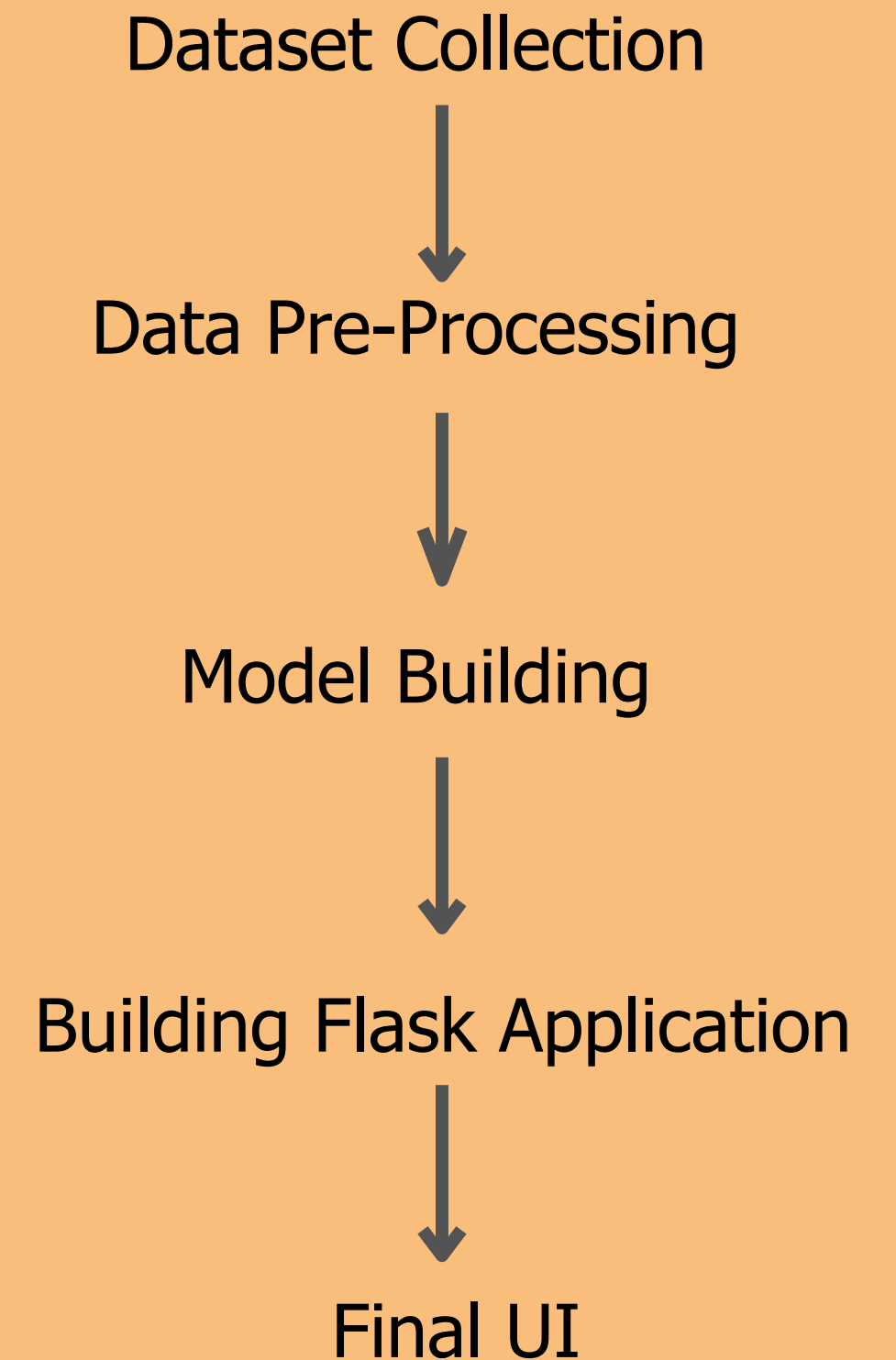
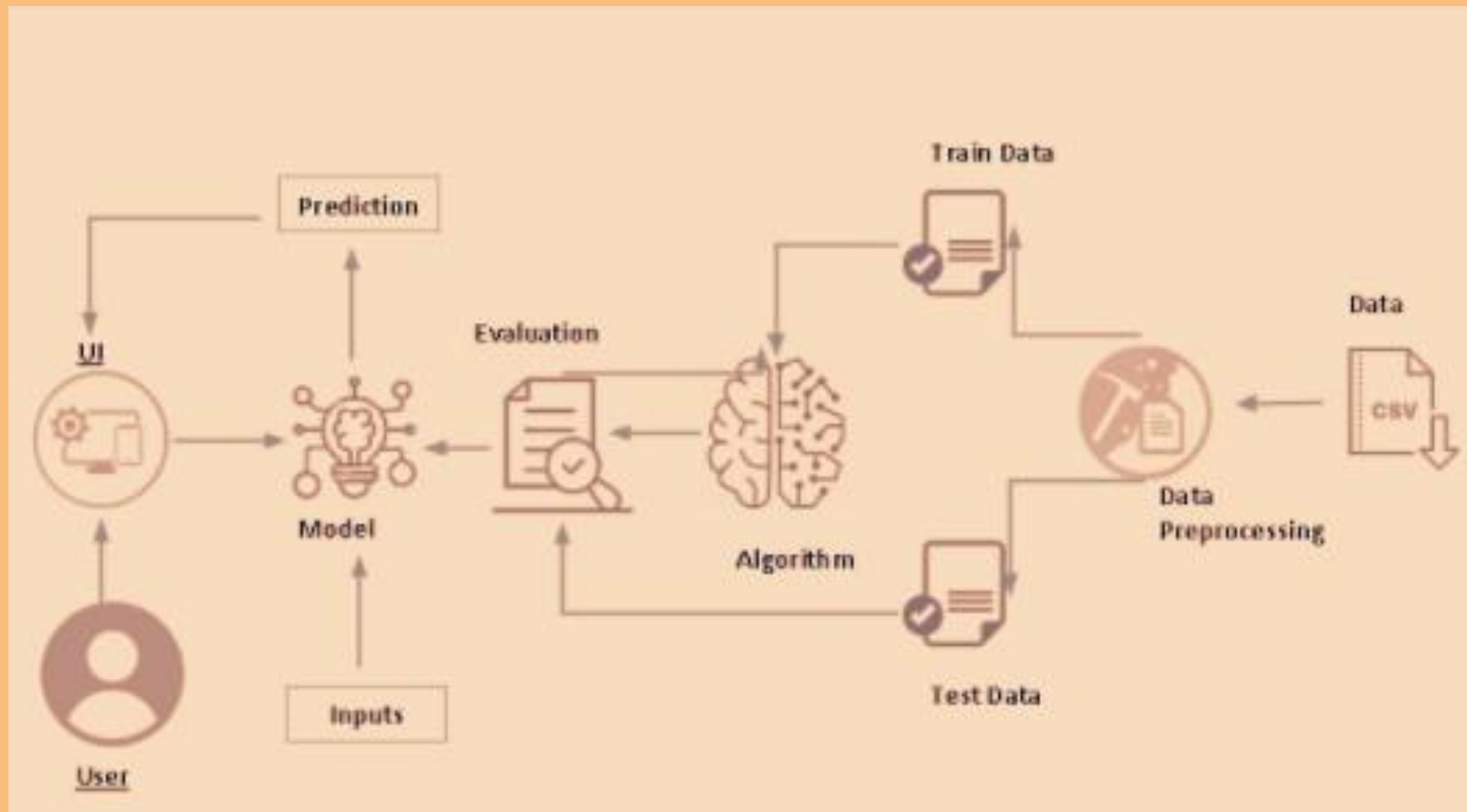
*"A Machine Learning model for calculating  
CO<sub>2</sub> Emissions by country"*

Due to the increasingly deteriorating environment, it is time for the government to upgrade the Energy Consumption structure by making use of Machine Learning prediction to analyze and control the CO<sub>2</sub> emissions in future



# PROJECT ARCHITECTURE & FLOW

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# PROJECT UI

SmartBridge



## Prediction of Co2 Emissions By Country

[Go to Predictor](#)

## About the Project

"A Machine Learning Model for calculating CO2 emission by country, Due to the increasingly deteriorating environment, it is time the government to upgrade the energy consumption structure". Significantly reducing CO2 emissions from countries will not be easy, but as we have data of countries emission by applying Machine Learning we can extract the important features for getting the output.

# PROJECT UI

SmartBridge



## Predictor - Co2 Emission By Country

Country Name

Select the CountryName



Country Code

Select the Country Code



Indicator Name

Select the Indicator Name



Year


Enter the Year




(Enter Year from 1960-2015)


Predict

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 IBM Watson Studio

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Prajwal S's Account



PS

Deployments / Co2\_model / Co2\_model /

## Co2\_deploy Deployed Online

API reference

Test

Enter input data

Body

```
{  
  "input_data": [  
    {  
      "fields": ["f0", "f1", "f2", "f3"],  
      "values": [[0, 0, 0, 0]]  
    }  
  ]  
}
```

Predict

Result

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2     {  
3       "fields": [  
4         "prediction"  
5       ],  
6       "values": [  
7         [  
8           1.236742  
9         ]  
10      ]  
11    }  
12  ]  
13 }
```



THANKYOU