

WIREFRAME

Insurance Premium Prediction

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Abstract

This data science project focuses on developing a comprehensive solution to predict and mitigate customer churn in a subscription-based business model. The project follows a systematic end-to-end approach, encompassing data collection, preprocessing, exploratory data analysis (EDA), feature engineering, model selection, training, and deployment. The primary objective is to empower businesses with actionable insights to retain valuable customers and optimize revenue streams.

The project begins with data collection from diverse sources, including customer interactions, transaction history, and demographic information. Data preprocessing involves cleaning, handling missing values, and transforming raw data into a format suitable for analysis. The EDA phase employs statistical and visual techniques to uncover patterns, correlations, and potential factors influencing customer churn.

The project emphasizes the importance of interpretability, providing stakeholders with clear insights into the factors contributing to customer churn. Model explanations and visualizations aid in understanding the decision-making process and guide strategic decision-making.

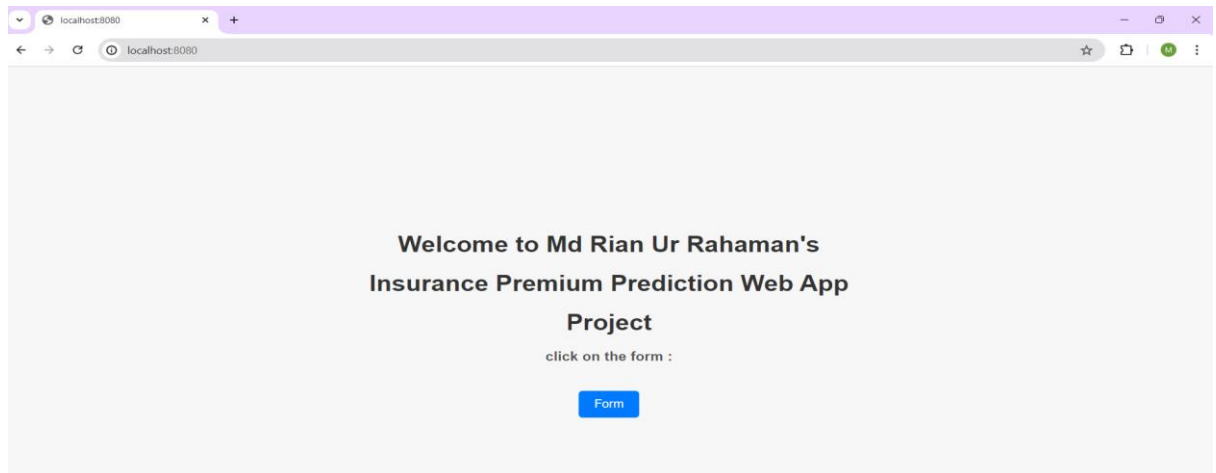
The selected model is then deployed into a production environment, allowing real-time predictions on new data. Integration with existing systems and continuous monitoring ensure the model's effectiveness over time.

The project concludes with a comprehensive evaluation of the entire process, including model performance metrics, business impact, and insights gained.

By implementing this end-to-end data science project, businesses can proactively address customer churn, reduce revenue loss, and enhance overall customer satisfaction.

1 Web App Interface :

This is a basic Home Page , just welcoming the users. It is made by HTML,CSS.



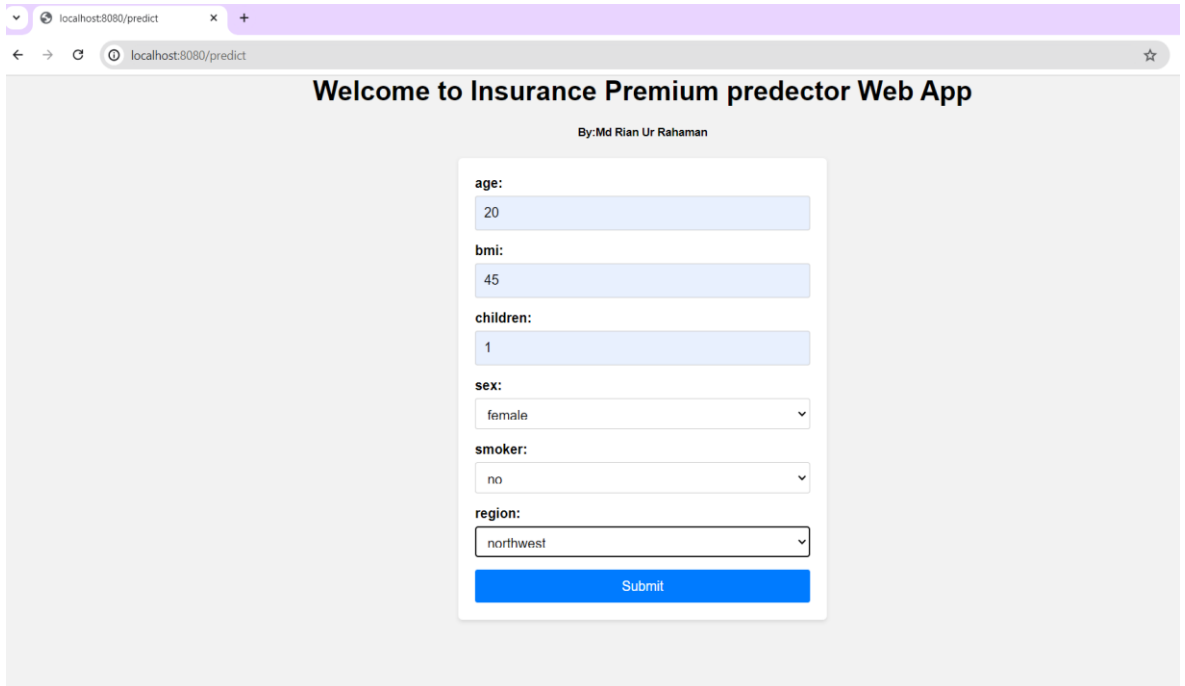
1.1 Landing Web Page

By clicking the form button , we can go to main web app page to calculate the actual insurance premium

A screenshot of a web browser showing a landing page. The browser's address bar shows 'localhost:8080/predict'. The page has a light gray background. At the top, it says 'Welcome to Insurance Premium predictor Web App'. Below this, it says 'By: Md Rian Ur Rahaman'. In the center, there is a white form with a blue 'Submit' button at the bottom. The form contains the following fields: 'age:' with a text input field containing 'Enter age value'; 'bmi:' with a text input field containing 'Enter bmi value'; 'children:' with a text input field containing 'Enter children value'; 'sex:' with a dropdown menu showing 'male'; 'smoker:' with a dropdown menu showing 'ves'; and 'region:' with a dropdown menu showing 'southwest'.

2 User Input :

Here we can give value of age , bmi , children no , smoker , region .

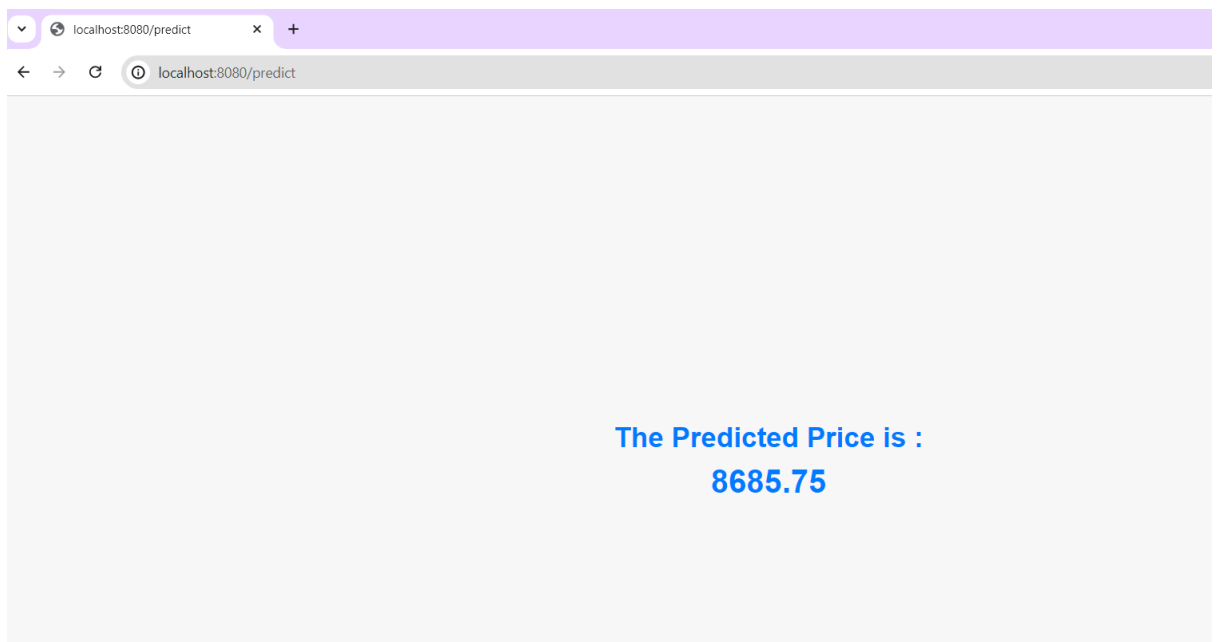


The screenshot shows a web browser window with the address bar displaying 'localhost:8080/predict'. The page title is 'Welcome to Insurance Premium predictor Web App' and the author is 'By: Md Rian Ur Rahaman'. The form contains the following fields:

- age: 20
- bmi: 45
- children: 1
- sex: female
- smoker: no
- region: northwest

A blue 'Submit' button is located at the bottom of the form.

3 Result Page :



The screenshot shows the result page of the web application. The predicted price is displayed in blue text:

**The Predicted Price is :
8685.75**

