Wireframe

ENERGY EFFICIENCY

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Document Version Control:

Version	Date	Author	Description
0.1	19-04-2023	Parvej alam	Abstarct, UserInterface
0.1	21-04-2023	Parvej alam	User Input, Result Page

Contents

1. Abstract

Energy efficiency for reisdential building can be improved by choosing the heavy load as per the requirement. Namely, Heating Load and Cooling Load are more power consuming loads. Hence, predicting the correct ratings for both the above mentioned loads will save the energy utilisation or will reduce energy loss of the residential buildings. Now, for that purpose regression type supervised machine learning model will be created. This model will takes eight inputs namely, Relative compactness, surface area, wall area, roof area, overall height, orientation, glazing area, glazing area distribution and produces Multi-outputs namely, Heating Load (kW) and Cooling Load (kW) values.
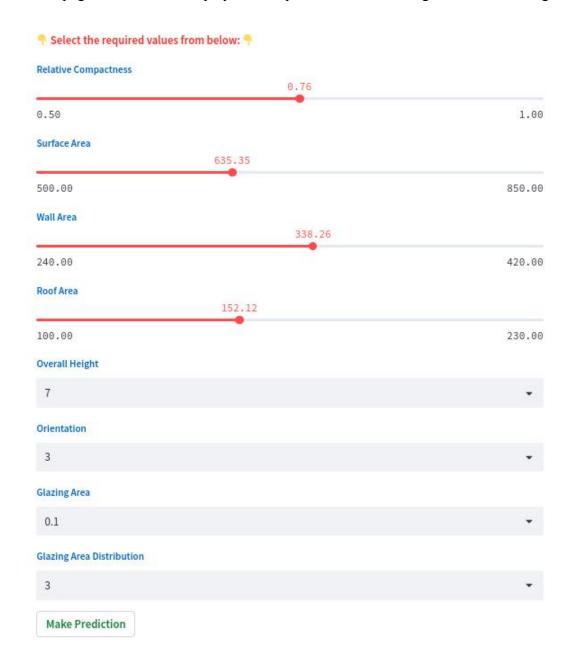
2. Web Interface

The web interface or web-page is single interface where both input from the user side and the predicted output is displayed.

3.   User-Input

Whenever the user hits provided url, the user input page appears where the user is required to provide the information like:

- Every user input has its own dropdown or slider where the user can select their input vlaueas per the desired.
- After providing the required input and pressing the submit or make prediction button, the page refreshes and displays the output interms of Heating Load and Cooling Load.

👇 **Select the required values from below:** 👇

Relative Compactness

0.76

0.50   1.00

Surface Area

635.35

500.00   850.00

Wall Area

338.26

240.00   420.00

Roof Area

152.12

100.00   230.00

Overall Height

| 7 | ▾ |

Orientation

| 3 | ▾ |

Glazing Area

| 0.1 | ▾ |

Glazing Area Distribution

| 3 | ▾ |

Make Prediction

4.   Result Page

After the user hits the submit button the page gets refreshed and the results are being displayed in the highlighted area in the above frame.

The user can refill all the inputs in same page and get the results in the sameway.

Relative Compactness
> 0.76

0.50   1.00

Surface Area
> 635.35

500.00   850.00

Wall Area
> 338.26

240.00   420.00

Roof Area
> 152.12

100.00   230.00

Overall Height

> 7   ▾

Orientation

> 3   ▾

Glazing Area

> 0.1   ▾

Glazing Area Distribution

> 3   ▾

Make Prediction

🌞 Heating Load: ⌇👉 34.797 kW

❄ Cooling Load: ⌇👉 38.073 kW