

Machine Learning & Deep Learning

Homework 04 – Heating Load Prediction

Fall 2019

A multivariate linear regression model has been built to predict the heating load in a residential building based on a set of descriptive features, describing the characteristics of the building. Heating load is the amount of heat energy required to keep a building at a specific temperature, during winter regardless outside temperature.

The descriptive features used were (a) the overall surface area of the building, (b) the height of the building, (c) the area of the building's roof, and (d) the percentage of wall area in the building that is glazed. This kind of model would be useful to architects or engineers when designing a new building.

Using the energy efficiency dataset archive.ics.uci.edu/ml/datasets/energy+efficiency reproduce the analyses that described by the authors in the paper *A. Accurate quantitative estimation of energy performance of residential buildings using statistical machine learning tools* available on bit.ly/2Ogmb5D