

Prediction of Health Insurance Costs

Abstract:

Health insurance is a type of insurance product that specifically guarantees the health costs or care of the insurance members if they fall ill or have an accident. Use information like a person's age, sex, BMI, no. of children and smoking habit to predict the price of yearly medical bills. This kind of model is useful for insurance companies to determine the yearly insurance premium for a person.

Problem Statement:

Predict insurance cost using some of the health factors using Linear Regression.

Variable Description:

Column	Description
Age	Age of the person
sex	gender of the person
bmi	body mass index
children	no of children person have
smoker	Whether the person is smoker or not
region	Region where person resides
charges	Insurance charges of the person

Scope:

- Missing value and outlier treatment
- Checking OLS assumptions
- Data Pre-processing using R
- Evaluating the linear regression model with metrics like RMSE and making predictions

Learning Outcome:

The students will get a better understanding of how to make a prediction using Linear Regression and evaluate the model using R.