INNOMATICS RESEARCH LABS

The Boston Housing Dataset:

Attribute Information:

The Boston Housing Dataset is derived from information collected by the U.S. Census Service concerning housing in the area of Boston MA. The following describes the dataset columns:

CRIM - per capita crime rate by town
ZN - proportion of residential land zoned for lots over 25,000 sq.ft.
INDUS - proportion of non-retail business acres per town.
CHAS - Charles River dummy variable (1 if tract bounds river; 0 otherwise) NOX - nitric oxides concentration (parts per 10 million)
RM - average number of rooms per dwelling
AGE - proportion of owner-occupied units built prior to 1940
DIS - weighted distances to five Boston employment centres
RAD - index of accessibility to radial highways
TAX - full-value property-tax rate per $10,000
PTRATIO - pupil-teacher ratio by town
B - 1000(Bk - 0.63)^2 where Bk is the proportion of blacks by town
LSTAT - % lower status of the population
MEDV - Median value of owner-occupied homes in $1000's

Steps To Perform the Model:

- Load the dataset
- Preprocessing.
    - a) Print the first 5 rows of the dataset
    - b) Check the features in the dataset
    - c)Check the missing values
    - d)Check the numerical features in the dataset
    - e) Check the distribution of categorical columns
- Separate features and Labels
- Split the dataset to train and test
- Do normalisation if required
- Now build as neural networks (ANN)

- Compile the model
- Make predictions
- Find Accuracy score
- Build the ANN models with increasing 2 dense layers to each model and compare the accuracy scores(Minimum 5 models Required)
- Visualize train and validation Accuracy and Losses for every model.

Note: For any doubt's clarifications, Join the mentor session from 2:00 pm to 6:00 pm or reach us on Discord 10:00 AM to 5:00 PM.

Thanks and Regards,
Innomatics.