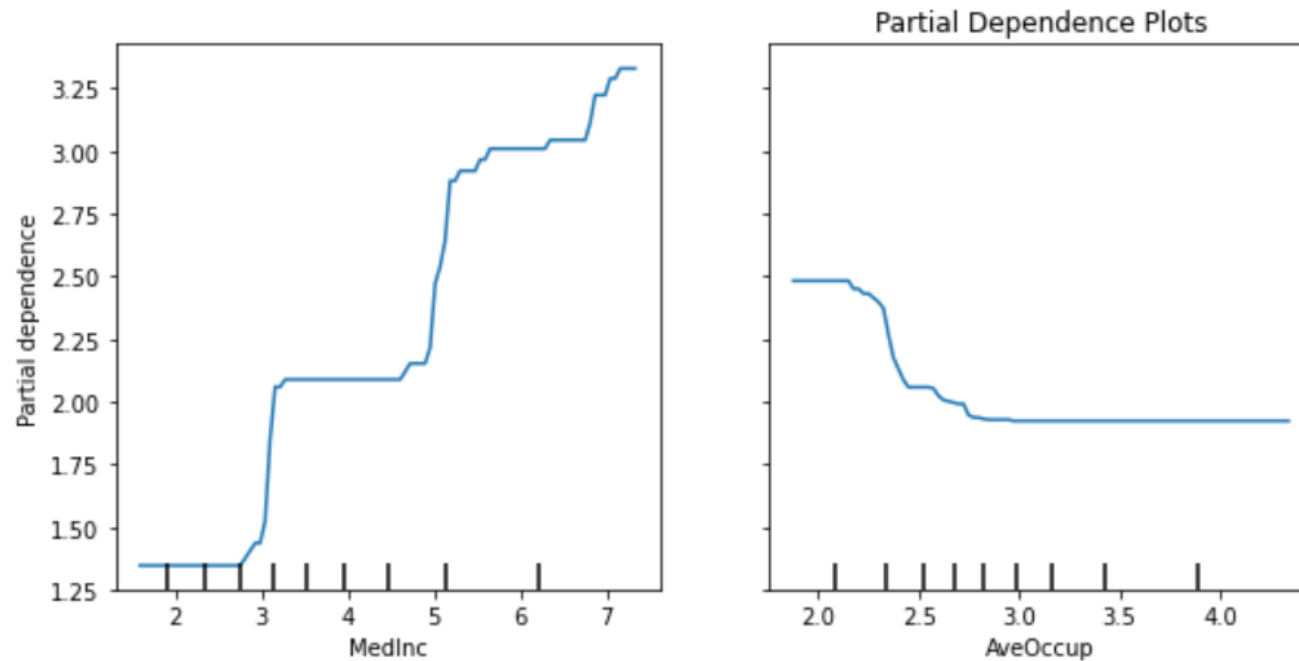




# Individual Conditional Expectation

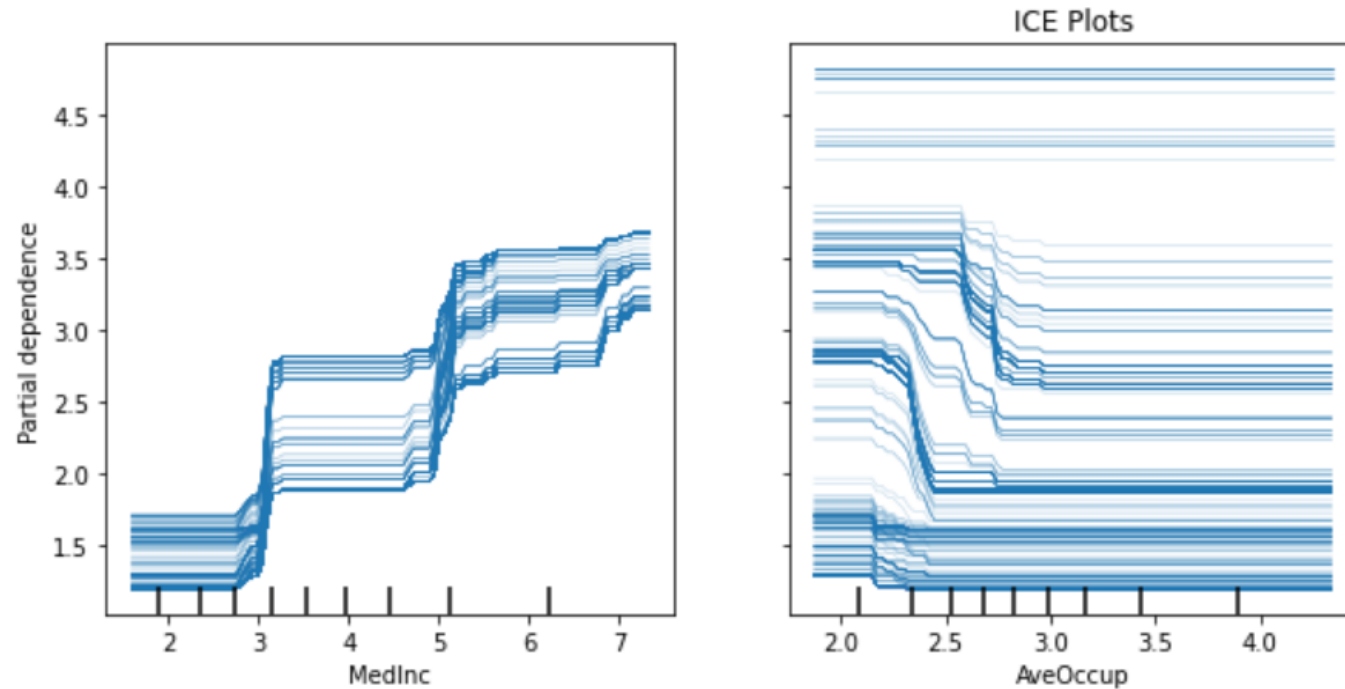


# PDP



Plots the **average prediction** for given values of a variable.

# ICE

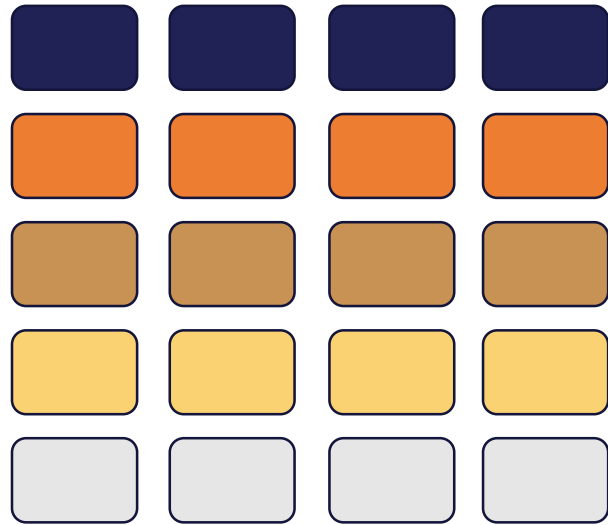


Plots the change in the **predictions** for every observation, given the values of a variable.

ICE is a disaggregated PDP.

# ICE mechanism

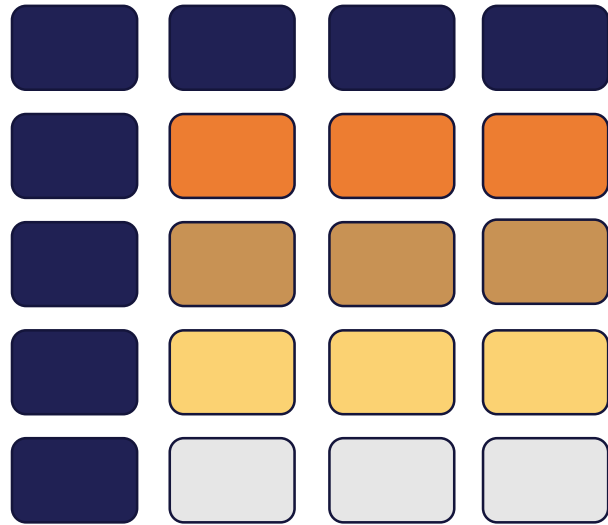
**Step 1:** train a ML model.



Machine  
Learning  
Model



# ICE mechanism



Machine  
Learning  
Model

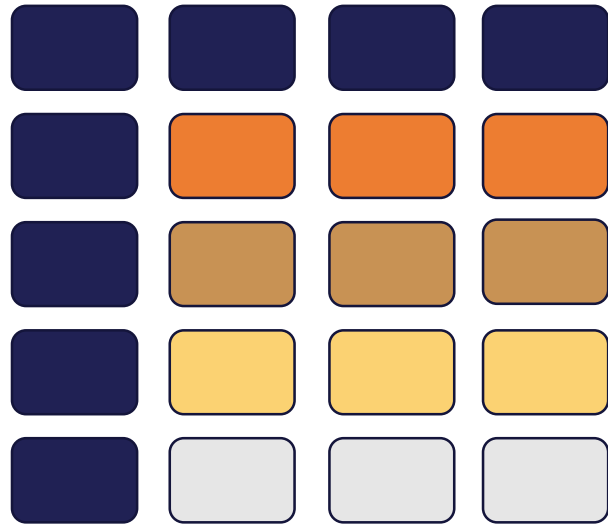
## Step 2:

Choose a feature

Set all values to the same number / category



# ICE mechanism



Machine  
Learning  
Model

## Step 2:

Choose a feature

Set all values to the same number / category

Obtain the predictions

Prediction

Prediction

Prediction

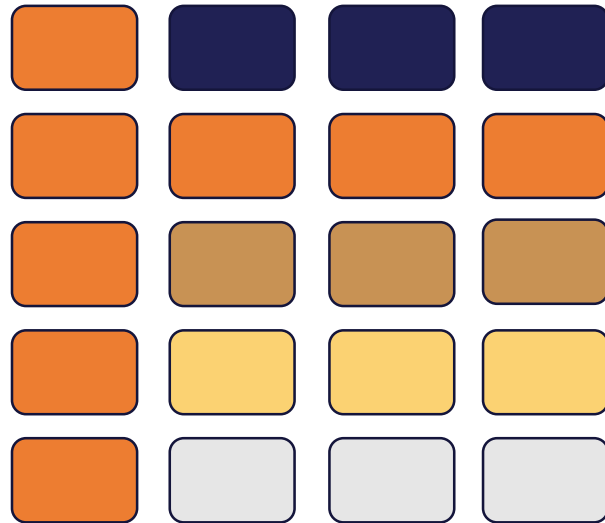
Prediction

Prediction

# ICE mechanism

## Step 3:

Repeat for other values of the feature



Machine  
Learning  
Model

Prediction

Prediction

Prediction

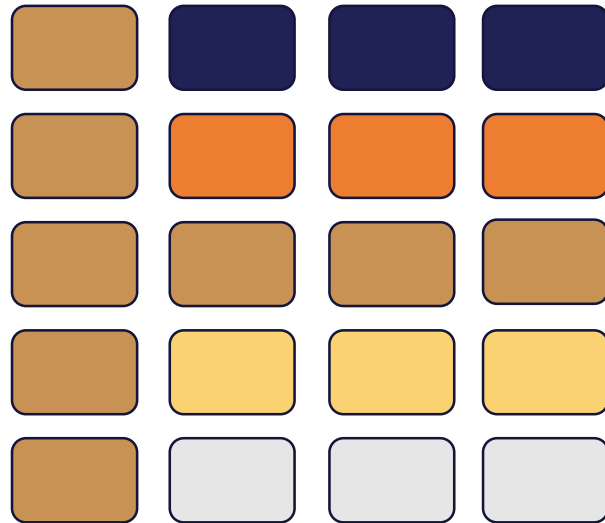
Prediction

Prediction

# ICE mechanism

## Step 3:

Repeat for other values of the feature



Machine  
Learning  
Model

Prediction

Prediction

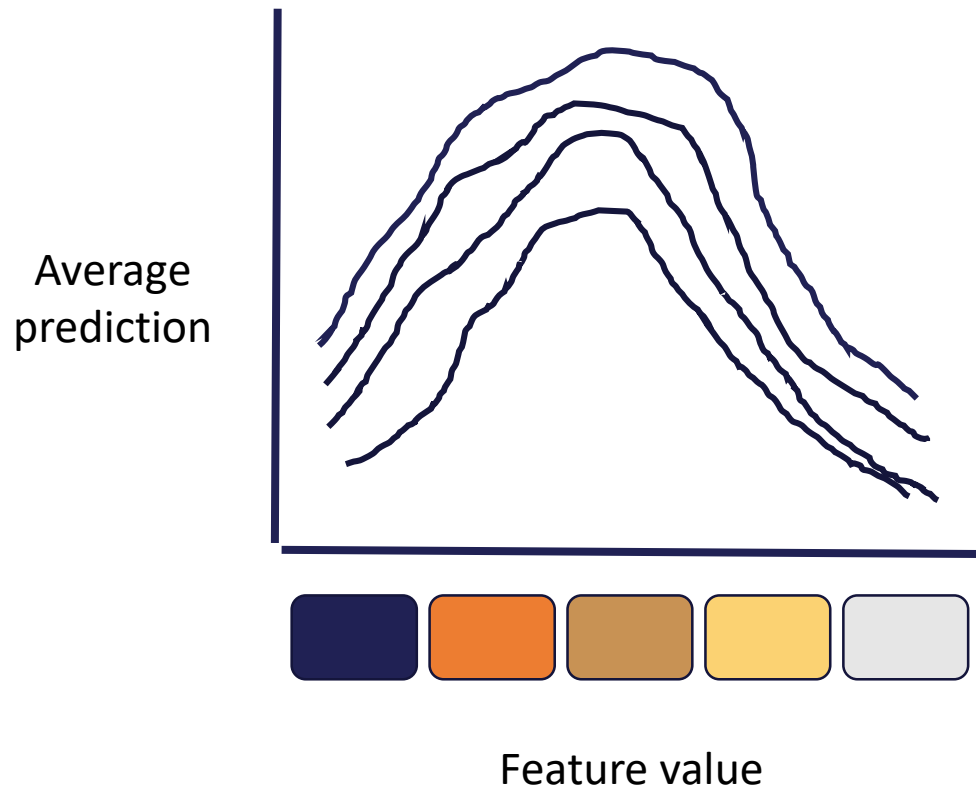
Prediction

Prediction

Prediction



# ICE plot



Plot:  
Predictions for every observation vs  
feature value.

# THANK YOU

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