UDACITY

PROJECT

Predicting Boston Housing Prices

A part of the Machine Learning Engineer Nanodegree Program

PROJECT REVIEW

NOTES

SHARE YOUR ACCOMPLISHMENT!

Requires Changes

4 SPECIFICATIONS REQUIRE CHANGES

It's clear that you put a lot of work here, you are almost done, just a little more work and you are free to go! :-)

awesome work so far !! \0/

congratulations !

Data Exploration

All requested statistics for the Boston Housing dataset are accurately calculated. Student correctly leverages NumPy functionality to obtain these results.

All Statistics must be calculated using numpy.

minimum_price = prices.min() ❌
maximum_price = prices.max() ❌
mean_price = prices.mean() ❌
median_price = prices.median() ❌
std_price = prices.std() ❌

Example:
mean_price = np.mean(prices) ✅

mean_price = np.mean(prices) ✅
median_price = np.median(prices) ✅
std_price = np.std(prices)✅

Student correctly justifies how each feature correlates with an increase or decrease in the target variable.

Nice intuition ! 100% right ! 👏👏👏👏

Developing a Model

Student correctly identifies whether the hypothetical model successfully captures the variation of the target variable based on the model's R^2 score.
The performance metric is correctly implemented in code.

Student provides a valid reason for why a dataset is split into training and testing subsets for a model.
Training and testing split is correctly implemented in code.

Nice job. You can also find more info here: https://info.salford-systems.com/blog/bid/337783/Why-Data-Scientists-Split-Data-into-Train-and-Test

Analyzing Model Performance

Student correctly identifies the trend of both the training and testing curves from the graph as more training points are added. Discussion is made as to whether additional training points would benefit the model.

Basically you just spend time for small (very small) increase score.

Student correctly identifies whether the model at a max depth of 1 and a max depth of 10 suffer from either high bias or high variance, with justification using the complexity curves graph.

Student picks a best-guess optimal model with reasonable justification using the model complexity graph.

> The maximum depth model that generalizes to unseen data the best will likely be a model of max

> depth 3.

Nice one ! 😄

Evaluating Model Performance

Student correctly describes the grid search technique and how it can be applied to a learning algorithm.

You are almost there.

You can find more info here:
https://www.quora.com/Machine-Learning-How-does-grid-search-work

Student correctly describes the k-fold cross-validation technique and discusses the benefits of its application when used with grid search when optimizing a model.

great answer.
Just for your complimentary research, I linked a video for you.
https://www.youtube.com/watch?v=TIgfjmp-4BA

Student correctly implements the `fit_model` function in code.

> params = {'max_depth':range(1,10)}

Should be **params = {"max_depth":range(1, 11)}**

The range(a, b) works with integers where a <= x <b. If a=0 and b=10 the range will go between 0 to 9 and not 10.

Student reports the optimal model and compares this model to the one they chose earlier.

> max_depth is 4 for the optimal model, the best guess estimate for max_depth leveraging graphs and intuition was a max_depth of 3.

Nice value, values most often reported are 4 or 5

Student reports the predicted selling price for the three clients listed in the provided table. Discussion is made for each of the three predictions as to whether these prices are reasonable given the data and the earlier calculated descriptive statistics.

these prices are reasonable. I agree with your answer

Student thoroughly discusses whether the model should or should not be used in a real-world setting.

You forgot two question

Would data collected in an urban city like Boston be applicable in a rural city?
Is it fair to judge the price of an individual home based on the characteristics of the entire neighborhood?

RESUBMIT

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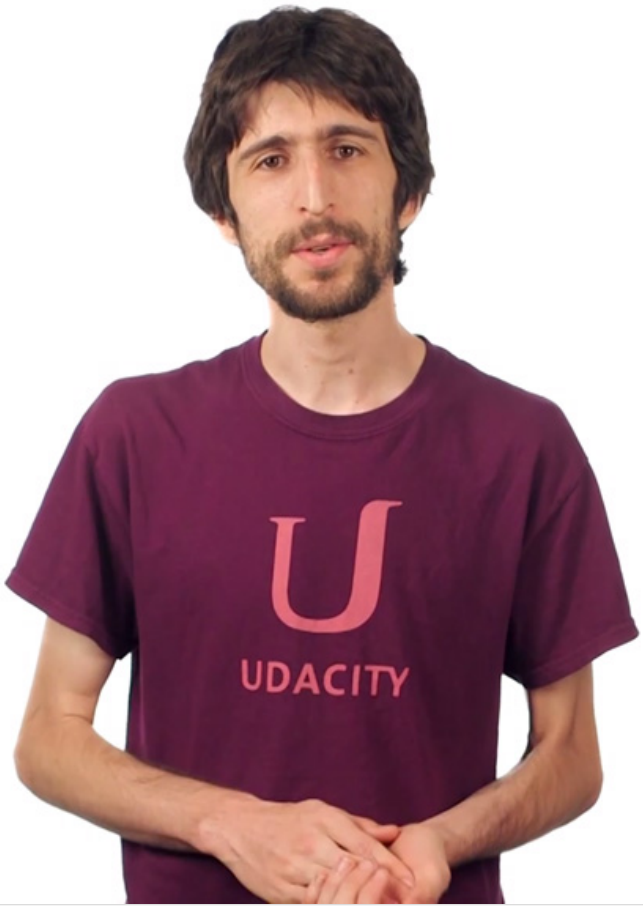

Best practices for your project resubmission

Ben shares 5 helpful tips to get you through revising and resubmitting your project.

Watch Video (3:01)

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Student FAQ