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Exercise

Local Model-Agnostic Interpretation Methods

Exercises

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- How does the LIME model work?
- In which cases you can't use SHAP Explainer?
- You need a fast model. Do you choose LIME or SHAP Explainer?
- Which model do you use if you want to take into account the features interactions?
- Can explain global models using LIME?

Exercises

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- Read the chocolate data from flavors_of_cacao_2.csv
- How can you use categorical data for classification?
- -> encode categorical data using OneHotEncoder
- Define output: y>=3.5 -> y=1 else y=0
- Create the following model

```
svm_mdl = svm.SVC(probability=True, gamma='auto',
random_state=rand)
```

Exercises

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- Train the model
- Make predictions for the test data
- Print the mean_squared_error of train and test data
- Summarize the training data using k-means
- Initialize your explainer
- Compute the SHAP values for a test data set
- Plot the SHAP values for class == 1

Exercises

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- Use data of index 6 for local interpretation
- Print data from data set 6
- Plot local explanation for data set 6
  - Decision plot
  - Force plot and
  - Waterfall plot
- Interpret the results
- Use the LIME Explainer for the explanation of data set 6
- What is the interpretation?