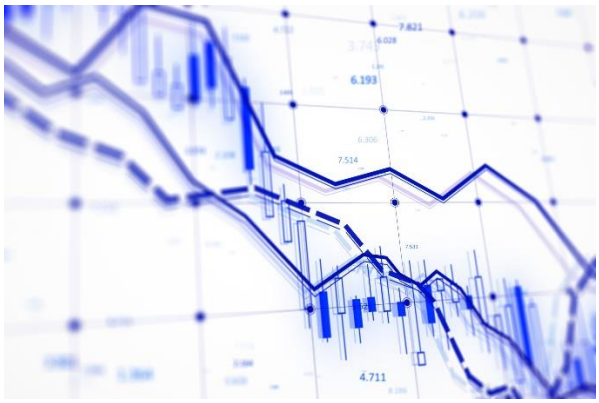
Week 7 Kahoot

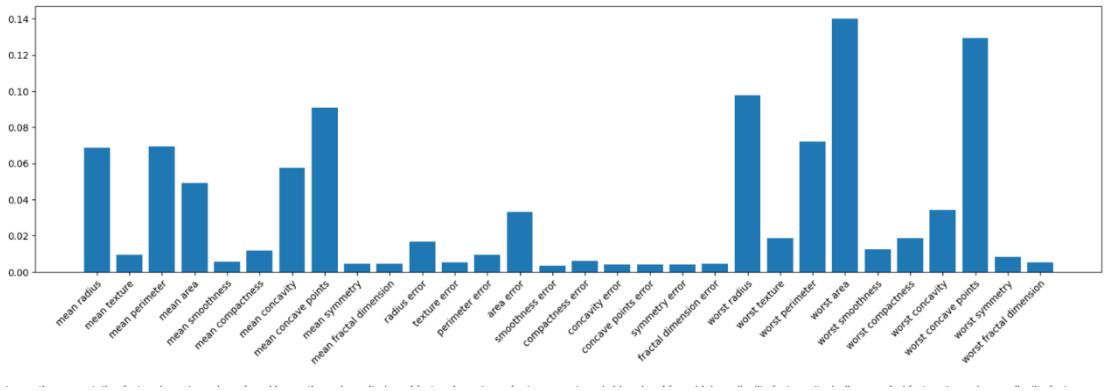
Q1



We have Linear Regression model y=-5-3A+2B+C (features: A, B, C, each can take values between -3 and 3, not correlated)

- **Feature A is most important for the model**
- Feature B is most important for the model
- Feature C is most important for the model
- We can't say which feature is more important, as data might not be scaled

Q2



Looking at feature importance plot for a classifier with non-correlated features we can see

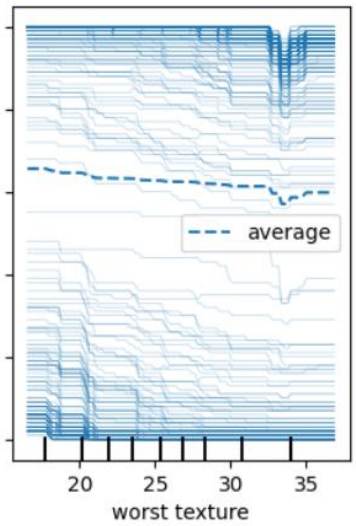
- which feature increases the most the predicted probability for class 1
- **which feature the model relies on the most to make a prediction**
- which feature is the most correlated with the target
- which feature improves the model's performance the most

Q3

To get feature importance for overall behavior of random forest regressor, which method we CANNOT use

- permutation method
- GINI method
- **LIME**
- SHAP

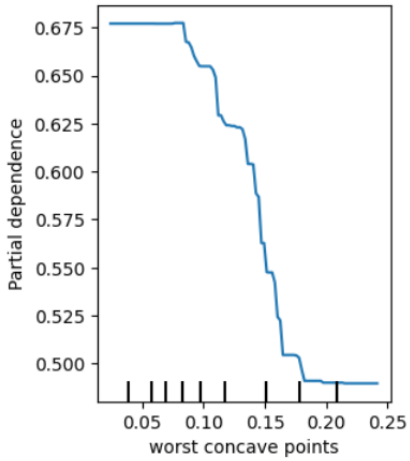
Q4



Each line in Individual Conditional Expectation plot for feature A represents

- model's prediction for one data point as all features except A vary
- **model's prediction for one data point as feature A varies**
- average of model's predictions for all data points with the same value of A
- average of true target values for all data points with the same value of A

Q5



Each point on Partial dependence plot for feature A represents

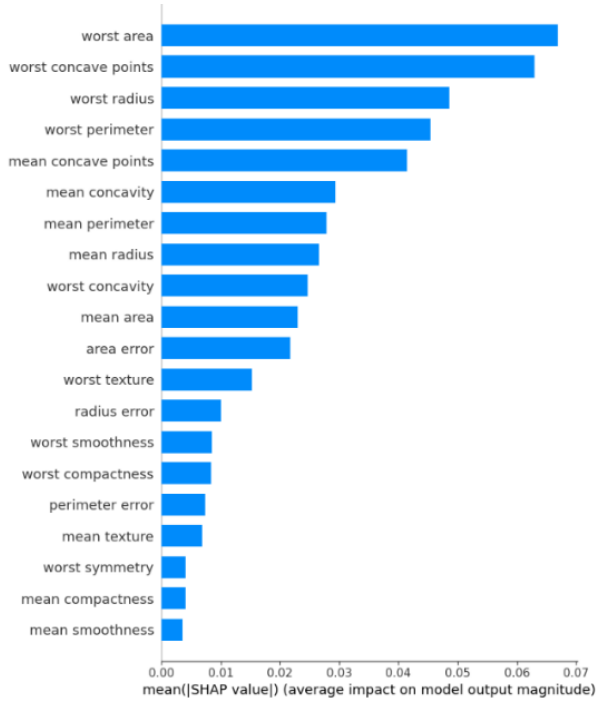
- average prediction for data points with the same value of A
- the change in prediction when feature A is removed from the model.
- **average prediction of all data points when A is set to a specific value**
- the model prediction for a single instance as feature A varies.

Q6

Value predicted by LIME surrogate model is the same as the value predicted original model

- True
- **False**

Q7



What is the main step behind calculating shap values for understanding importance of feature A

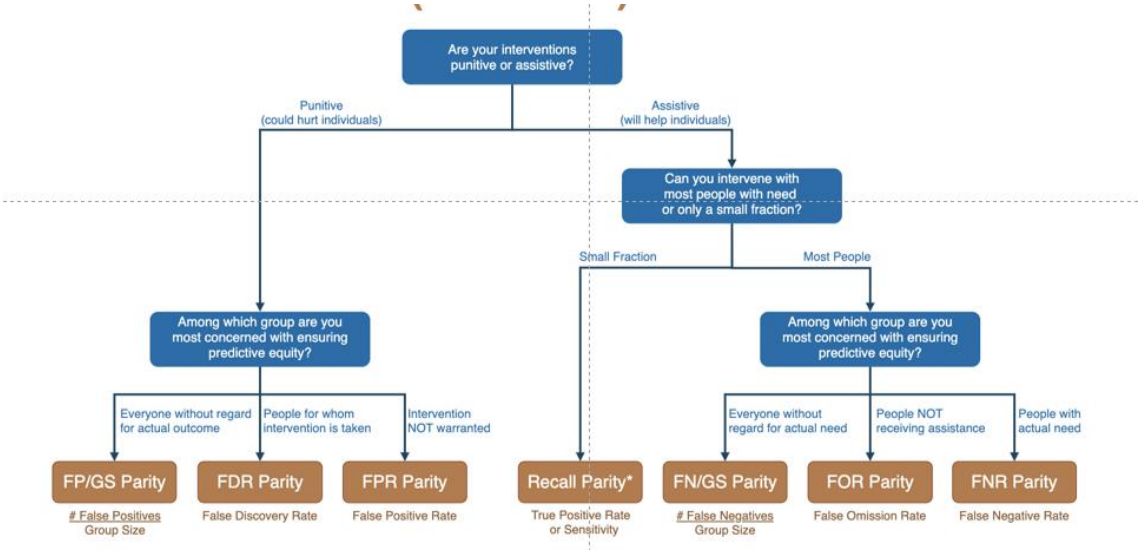
- count number of times feature A appears in tree splits
- retrain model with only feature A
- set all other features to zero and measure prediction change
- **measure prediction change when feature A is included/not for all coalitions**

Q8

In shap each feature value is a force that either increases or decreases the prediction starting from baseline which is

- **average of the model predictions over the training data**
- minimum possible predicted value over the training data
- prediction for a baseline instance where all features are set to zero
- minimum possible contribution of a feature

Q9



What does a high disparity value detected by Aequitas suggest?

- the model is overfitting
- the model has high variance across different cross-validation folds
- **the model behaves differently across groups, indicating potential bias**
- the decision threshold needs to be increased for all classes

Q10

Regarding the course project

- I think I know who my group members are, but we have no plans yet
- I talked to my team members, and we downloaded the dataset
- **I talked to my team members, and we started working on the project**
- oh that's right, we also have a group project, good to know