Quiz:

(a) In which scenarios are inherently interpretable models usually much harder to interpret?

(b) Why does usually interpretability become worse or more difficult if the generalization performance of the model improves?

(c) Should we always prefer interpretable models? Explain and describe for which use cases interpretable models would be inconvenient?

(d) In the linear model, the effect and importance of a feature can be inferred from the estimated β-coefficients. Is this statement true or false. Explain!

(e) What is so special about LASSO compared to a LM with regards to interpretability? Would you always prefer LASSO over a LM?

(f) Do the beta-coefficients of GLM always provide simple explanations with respect to the target outcome to be predicted?

(g) Explain the feature importance provided by model-based boosting. What is the difference to the (Gini) feature importance from decision trees?

(h) How can we use inherently interpretable models to provide insights whether two features are dependent?

(i) What are the disadvantages of CART? What methods address them and how?