# Practice Problems 2.5

Machine Learning Course

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1. Obtain the dataset Wine, split it in training (70%) and test sets (30%).
2. Train one decision tree classifier and calculate a confidence interval for its accuracy in the test dataset using a Binomial distribution.
3. Perform cross-validation with bootstrap (30 repetitions) and calculate a confidence interval for its accuracy using a Student's $t$ distribution.
4. Consider an additional random forest classifier and compare its performance with the decision tree classifier using cross-validation (30 repetitions) with bootstrap and a $t$-test.
5. Compare the two classifiers using McNeamar's test.