A large software company's HR department has hired you to better understand why some employees are more likely to leave the firm than others. For this purpose, they give you a data set of 1,470 current and former employees with information on whether or not they have left the company, their tenure, gender, education, and several other variables (a description of discrete data can be found below). The company wants you to provide two classifiers:

1. a neural network that can predict employee attrition (variable name is **attrition**)
2. a boosted ensemble of trees that can predict employee attrition but also provide a ranking of **feature importance** (i.e. the features that have the largest influence on the decision to quit their jobs)

The choice of features you want to consider is up to you. Your client has expert stats and ML knowledge, so your 1-page summary should focus on a comparison of the performances of the neural net and the boosted tree ensemble together with the advantages and disadvantages of each methods that might affect your results, as well as the features you found most important in the attrition exercise together with some **economic rationale** for why these features might be so important. The client assumes that you have undertaken appropriate variable transformations, standardization, and cleaning of the data.

The categorical variables have been coded as follows:

Education  
1 'Below College'  
2 'College'  
3 'Bachelor'  
4 'Master'  
5 'Doctor'

EnvironmentSatisfaction  
1 'Low'  
2 'Medium'  
3 'High'  
4 'Very High'

JobInvolvement  
1 'Low'  
2 'Medium'  
3 'High'  
4 'Very High'

JobSatisfaction  
1 'Low'  
2 'Medium'  
3 'High'  
4 'Very High'

PerformanceRating  
1 'Low'  
2 'Good'  
3 'Excellent'  
4 'Outstanding'

RelationshipSatisfaction  
1 'Low'  
2 'Medium'  
3 'High'  
4 'Very High'

WorkLifeBalance  
1 'Bad'  
2 'Good'  
3 'Better'  
4 'Best'