test

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Summary

We present an analysis of the classification of qualitative evaluations of weight-lifting exercises. A boosted trees algorithm was trained on the Weight Lifting Exercises Dataset. The prediction accuracy was found to be **99.94%** on a hold-out test set. This algorithm scored 20 out of 20 on a first attempt at the **Course Project Prediction Quiz Portion**.

Background

The data were originally collected and analyzed in this paper:

Velloso, E.; Bulling, A.; Gellersen, H.; Ugulino, W.; Fuks, H. Qualitative Activity Recognition of Weight Lifting Exercises. Proceedings of 4th International Conference in Cooperation with SIGCHI (Augmented Human '13) . Stuttgart, Germany: ACM SIGCHI, 2013.

The authors describe the dataset as follows:

Six young health participants were asked to perform one set of 10 repetitions of the Unilateral Dumbbell Biceps Curl in five different fashions: exactly according to the specification (Class A), throwing the elbows to the front (Class B), lifting the dumbbell only halfway (Class C), lowering the dumbbell only halfway (Class D) and throwing the hips to the front (Class E). Class A corresponds to the specified execution of the exercise, while the other 4 classes correspond to common mistakes.

Here we show a table of the occernces of the five classes in a training set sampled randomly from the data.