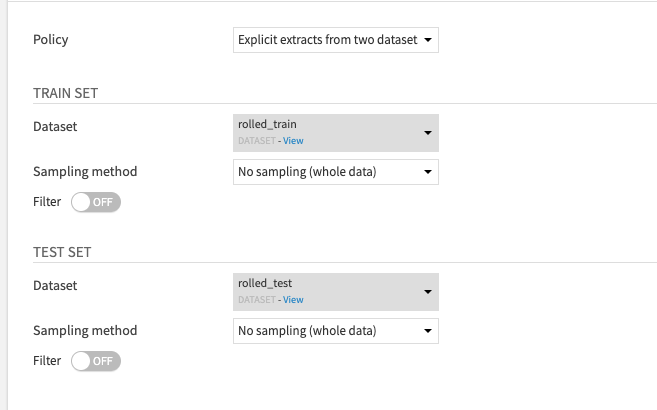
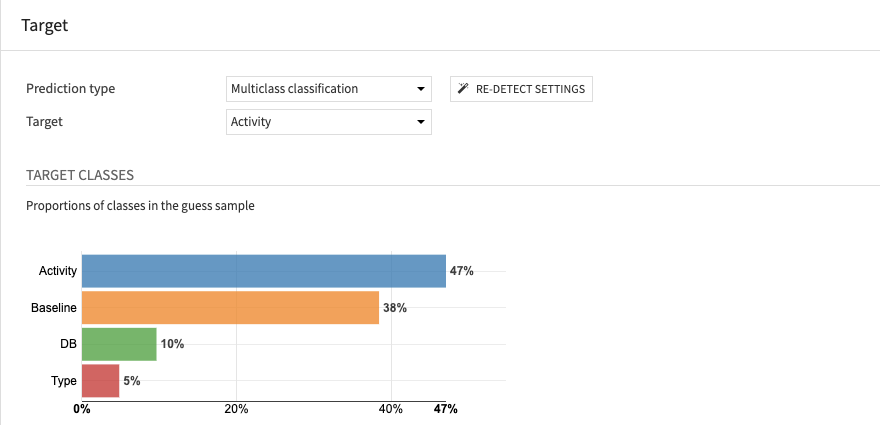
# **Random Forest Model**

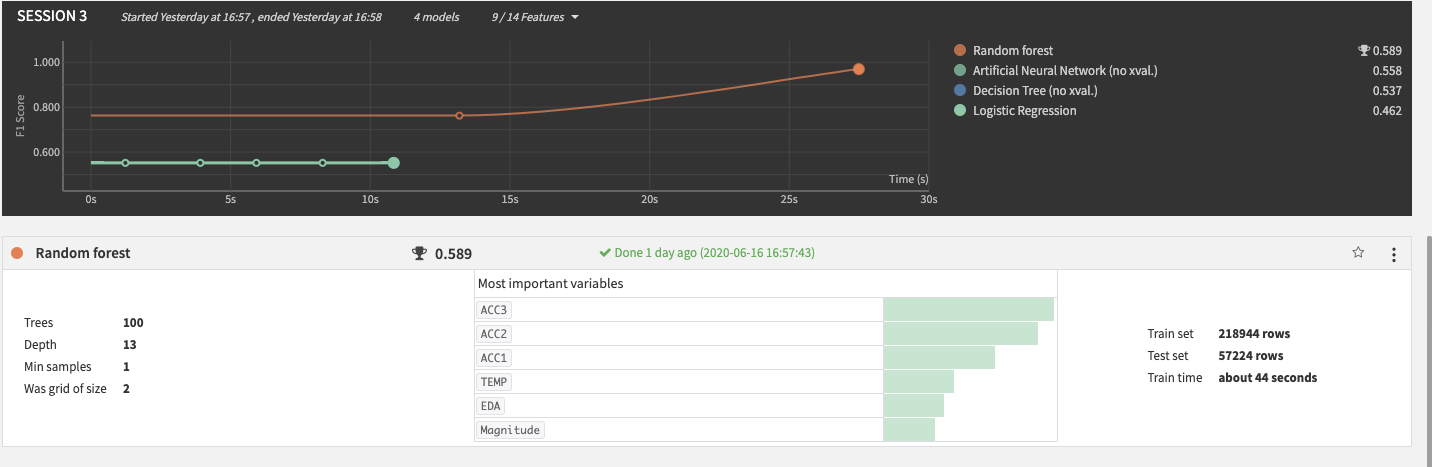


## **Model Input**

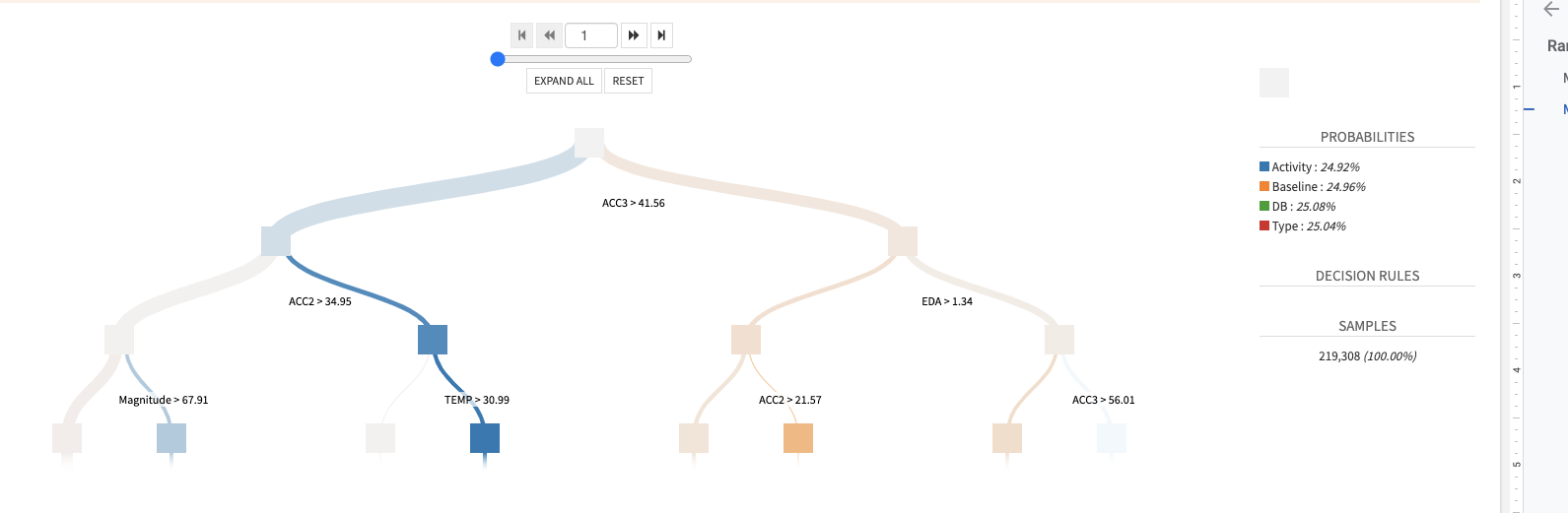
* Data was rolled on 10-second means
* Rolled\_train contains 80% of the data, grouped by subject\_id (80% of the subjects)
* Rolled\_test contains 20% remaining data
* Target Variable: Activity
* Features: ACC1, ACC2, ACC3, TEMP, EDA, BVP, HR, Magnitude
  + Standardization rescaling (mean 0, sd 1)
* 100 trees in the forest
* 13 maximum depth of the tree, 1 minimum sample per leaf
* Class weights applied to ensure that despite class imbalance, the trained model takes each class equally into account
* The main metric to test upon is **F1 score**

## **Model Output**

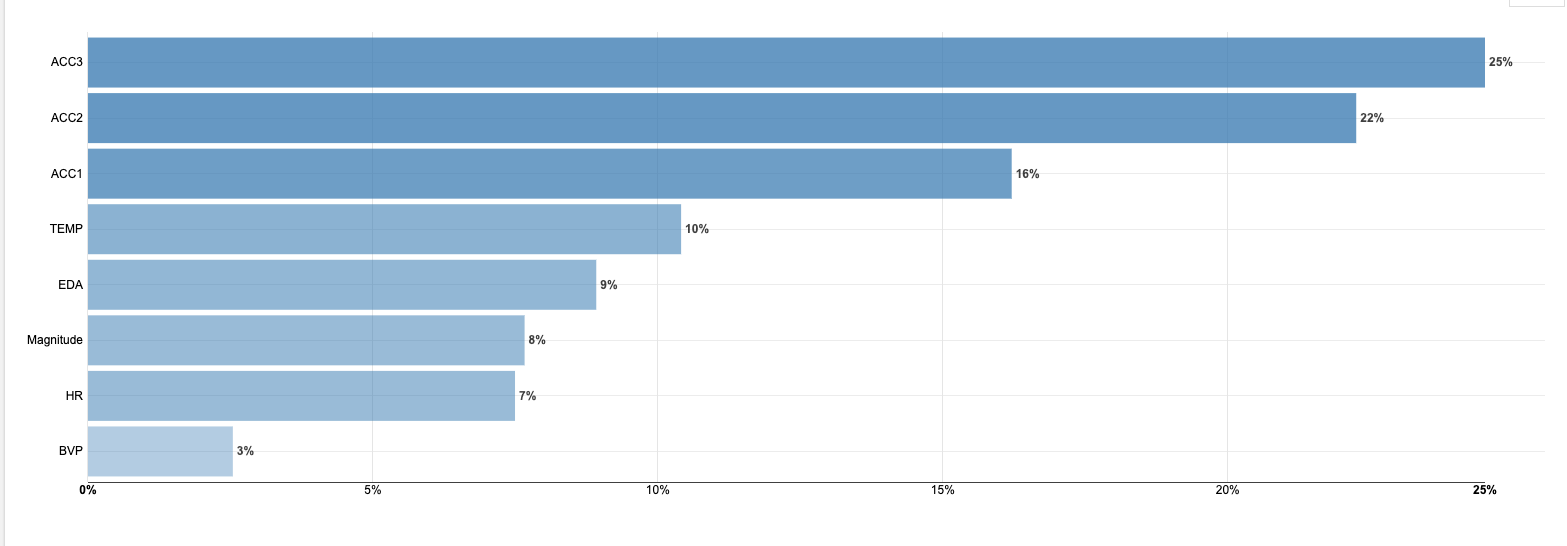
### F1 score



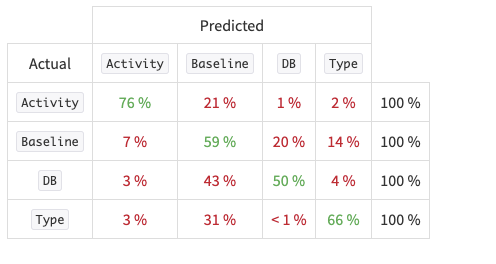
### Example of a Decision Tree



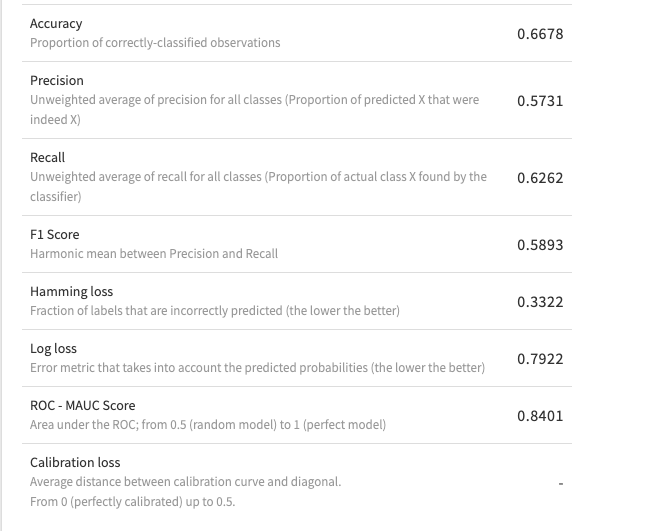
### Variable Importance



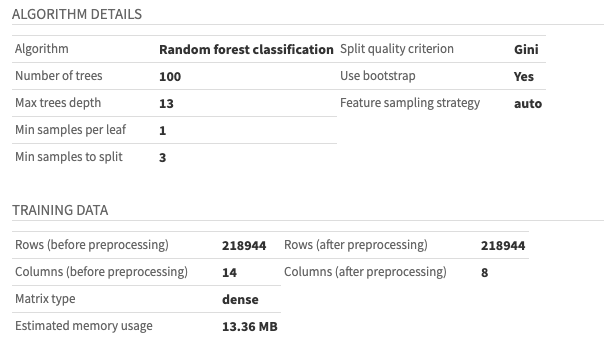
### Confusion Matrix

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### Detailed Metrics

****

### Algorithm Details



### Partial Dependence

