

Exercise 18

June 21, 2022

1 Exercise 18

1.1 a)

In general, features that show different values for the groups you want to separate can be useful for a classification. Bad features show no connection to the group of the object they describe.

1.2 b) -c)

I don't know how to access meaningful attributes :/

1.3 d)

A “roc auc score” of 0.5 means, that the classifier assigns randomly whether the event is a “track” or “cascade” particle. A set of features that results in a score of 0.5 is not associated with the particle type and therefore not useful for a classification.

A “roc auc score” of 1 means, that the classifier perfectly separates the events into the two groups.

1.4 e)

A “roc auc score” lower than 0.5 can only be achieved by guessing wrong on purpose (or having a bug), since a score of 0.5 already can be achieved by guessing random. It can be fixed by inverting the classification.