

Implementation of C4.5 on the iris dataset.

#Install Java and set JAVA_HOME path before installing Rweka package

#C4.5 algorithm is an extension of the ID3 algorithm and constructs a decision tree to

#maximize information gain (difference in entropy).

#install the package RWeka

```
install.packages("RWeka")
```

#load the package

```
library(RWeka)
```

#loading data and splitting it into training and testing data

```
data_train <- iris[1:105,]
```

```
data_test <- iris[106:150,]
```

#fit model

```
fit <- J48(Species~., data_train)
```

#summarize the model

```
summary(fit)
```

#make predictions

```
predictions <- predict(fit, data_test)
```

#confusion matrix

```
cm = table(predictions,iris[106:150,5])
```

```
cm
```

```
accuracy = sum(diag(cm))/length(iris[106:150,5])
```

```
accuracy
```
