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Steps to compile and run the java project

**Compilation**:

javac Parameter.java

javac Node.java

javac Heuristic.java

javac DecisionTree.java

**Building a Tree with Heuristic 1:**

**Compile:**

* javac DT\_Entropy\_BP.java
* javac DT\_Entropy\_AP.java

To Print the tree using Information gain before pruning.

**Running the program:**

**with the tree**

* java DT\_Entropy\_BP training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv yes
* java DT\_Entropy\_BP training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv yes

**without the tree (just the accuracies**)

* java DT\_Entropy\_BP training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv no
* java DT\_Entropy\_BP training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv no

To Print the tree using Information gain after pruning.

**Running the program:**

**with the tree**

* java DT\_Entropy\_BP 2 5 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv yes
* java DT\_Entropy\_BP 2 5 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv yes

**without the tree (just the accuracies)**

* java DT\_Entropy\_BP 2 5 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv no
* java DT\_Entropy\_BP 2 5 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv no

**Building a tree with Heuristic 2:**

**Compile:**

* javac DT\_ImpurityGain\_BP.java
* javac DT\_ImpurityGain\_AP.java

**To Print the tree using Impurity gain before pruning.**

**Running the program**:

**with the tree**

* java DT\_ImpurityGain\_BP training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv yes
* java DT\_ImpurityGain\_BP training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv yes

**without the tree (just the accuracies)**

* java DT\_ImpurityGain\_BP training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv no
* java DT\_ImpurityGain\_BP training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv no

**To Print the tree using Impurity gain after pruning.**

**Running the program:**

**with the tree**

* java DT\_ImpurityGain\_AP 2 5 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv yes
* java DT\_ImpurityGain\_AP 2 5 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv yes

**without the tree (just the accuracies)**

* java DT\_ImpurityGain\_AP 2 5 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv no
* java DT\_ImpurityGain\_P 2 5 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv no

**Building all together:**

**Compile:**

* javac Index.java

**Running the program:**

**with the tree**

* java Index 10 15 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv yes
* java Index 10 15 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv yes

**without the tree (just the accuracies)**

* java Index 10 15 training\_set\_1.csv validation\_set\_1.csv test\_set\_1.csv no
* java Index 10 15 training\_set\_2.csv validation\_set\_2.csv test\_set\_2.csv no