

CS6301.005 - Statistical methods in AI/ML

Homework/Assignment# 5

The program executes the way it is mentioned in the problem statement.

Task 1:

The program can be executed by the following commands

1. `javac ParaLearnFOD`
2. `java ParaLearnFOD <input-uai-file> <training-data> <test-data> <output-uai-file>`

ex: `java ParaLearnFOD 1.uai train-f-1.txt test.txt outFOD1`

The output messages are shown on the console.

Task 2:

The program can be executed by the following commands. The program uses another file VEPOD.java

1. `javac ParaLearnPOD`
2. `java ParaLearnPOD <input-uai-file> <training-data> <test-data> <output-uai-file>`

ex: `java ParaLearnPOD 1.uai train-p-1.txt test.txt outPOD1`

The output messages are shown on the console.

Task 3:

The program can be executed by the following commands. The program uses ParaLearnFOD.java.

1. `javac LearnBN`
2. `java LearnBN <input-uai-file> <training-data> <test-data> <output-uai-file>`

ex: `java LearnBN 1.uai train-f-1.txt test.txt outBN1`

The output messages are shown on the console.

Algorithm	LL-diff Train 1	LL-diff Train 2	LL-diff Train 3	LL-diff Train 4	LL-diff Train 5
FOD-param	4996431.77	1628710.63	396696.11	120200.13	43894.61
EM	4672562.75	1364266.31	654975.01	598590.11	587307.81
Chow-Liu	6210408.95	3208602.59	2852141.94	2859786.07	2843368.02