Bayes report

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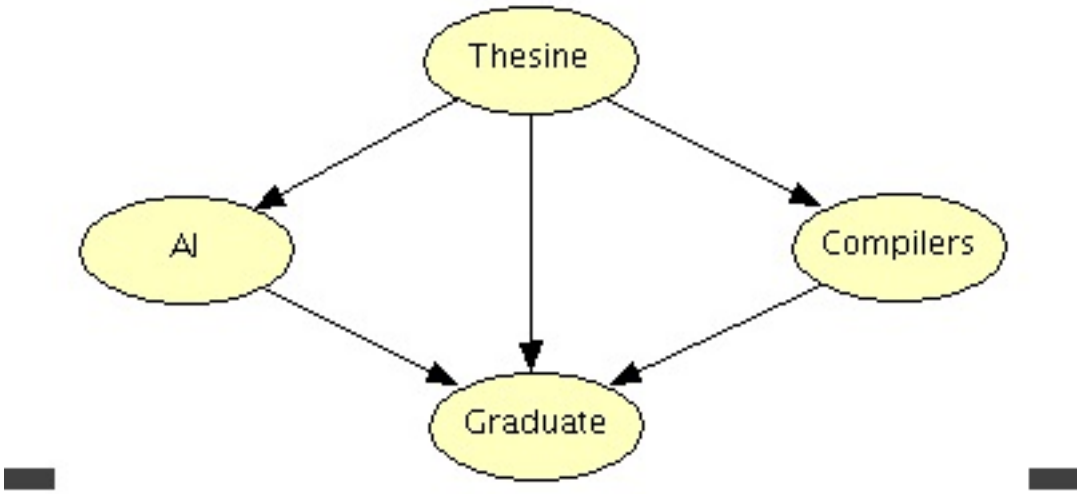
The model is based on the probabilites of Graduating/Not Graduating this semester given diferent proyect conditions of each subject.

HUGIN LITE

Model



Probabilites

Thesine | AI | Graduate | Compilers

Work Fast	0.5
Work Slow	0.5

Thesine | AI | Graduate | Compilers

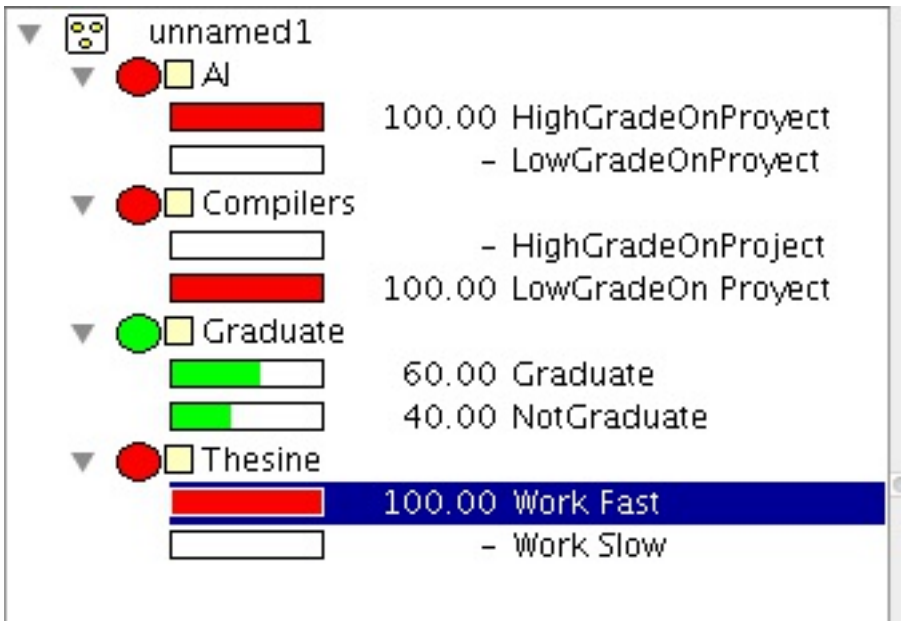
Thesine	Work Fast				Work Slow			
Compilers	HighGradeOnProject		LowGradeOn Proyect		HighGradeOnProject		LowGradeOn Proyect	
AI	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...
Graduate	0.9	0.6	0.6	0.3	0.3	0.1	0.3	0
NotGradu...	0.1	0.4	0.4	0.7	0.7	0.9	0.7	1

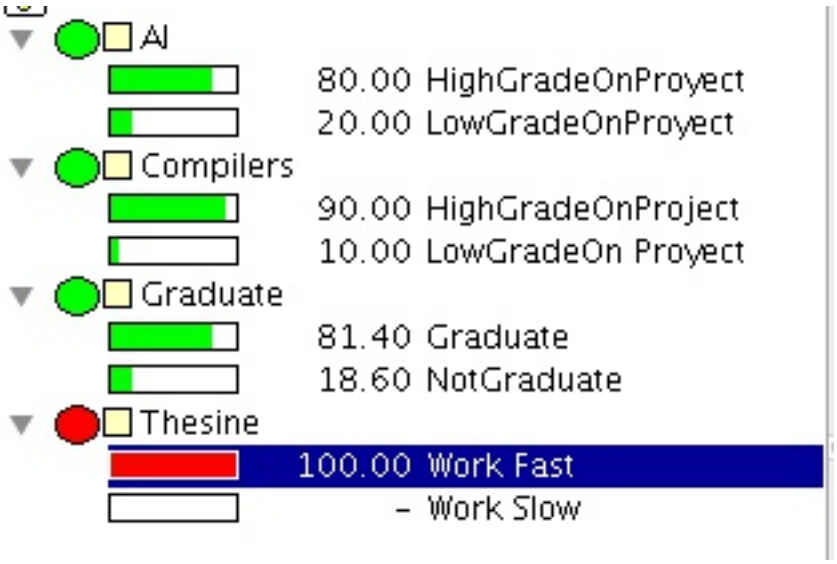
Thesine | AI | Graduate | Compilers

Thesine	Work Fast	Work Slow
HighGrad...	0.8	0.6
LowGrade...	0.2	0.4

Thesine	Work Fast				Work Slow			
Compilers	HighGradeOnProject		LowGradeOn Proyect		HighGradeOnProject		LowGradeOn Proyect	
AI	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...	HighGradeOnPr...	LowGradeOnPro...
Graduate	0.9	0.6	0.6	0.3	0.3	0.1	0.3	0
NotGradu...	0.1	0.4	0.4	0.7	0.7	0.9	0.7	1

Tests





Bayes implementation

```
> $ python3 bayes.py                                                    8.11.4 [±m
Thesine,AI,Compilers,Graduate
13
+Thesine=0.5
+AI|+Thesine=0.8
+AI|-Thesine=0.6
```

```
+Compilers|+Thesine=0.8
+Compilers|-Thesine=0.6
+Graduate|+Thesine,+Compilers,+AI=0.9
+Graduate|+Thesine,-Compilers,+AI=0.6
+Graduate|+Thesine,+Compilers,-AI=0.6
+Graduate|+Thesine,-Compilers,-AI=0.3
+Graduate|-Thesine,+Compilers,+AI=0.3
+Graduate|-Thesine,-Compilers,+AI=0.3
+Graduate|-Thesine,+Compilers,-AI=0.1
+Graduate|-Thesine,-Compilers,-AI=0.0
6
+AI
-Compilers
-Graduate|-Thesine,-Compilers,-AI
+Graduate|+Thesine,-Compilers,-AI
-Graduate|+Thesine,+Compilers,+AI
+Graduate|+Thesine,-Compilers,+AI
```

Result Comparison

Test	Result Hugin	Result Bayes
+AI	0.7	0.7
-Compilers	0.35	0.3
-Graduate|-Thesine,-Compilers,-AI	1.0	1.0
+Graduate|+Thesine,-Compilers,-AI	0.3	0.3
-Graduate|+Thesine,+Compilers,+AI	0.1	0.1
+Graduate|+Thesine,-Compilers,+AI	0.6	0.6

Hugin Tests

Category	Hugin Lite	Bayes implementation
User interface	Comprehensible interface	Command line
Queries	Through tables, using a UML alike system, in which every node has attributes with certain probability	Receives nodes as strings and parse it through data structures

Intuition	Easy to use because of the interface. It shows graphically how the probabilities interact	Straight forward, only one string output
Cost	Free, but includes more features when you pay for the complete version	Free. Lots of hours of work.