Intelligent Data Analysis and Probabilistic Inference Coursework 2

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1 IDAPIResults02.txt File Contents

Coursework Two Results by Hesam Ipakchi (00648378), Yijie Ge (00650073)

The Dependency matrix for HepatitisC data set

1.530	0.045	0.026	0.048	0.034	0.024	0.039	0.086	0.016
0.045	2.372	0.009	0.060	0.069	0.030	0.071	0.083	0.003
0.026	0.009	0.992	0.012	0.007	0.002	0.007	0.005	0.001
0.048	0.060	0.012	1.697	0.539	0.275	0.032	0.032	0.006
0.034	0.069	0.007	0.539	2.411	0.606	0.041	0.051	0.008
0.024	0.030	0.002	0.275	0.606	1.832	0.025	0.041	0.016
0.039	0.071	0.007	0.032	0.041	0.025	2.629	0.063	0.004
0.086	0.083	0.005	0.032	0.051	0.041	0.063	1.489	0.032
0.016	0.003	0.001	0.006	0.008	0.016	0.004	0.032	0.754

The Dependency list for HepatitisC data set

0.606	4.000	5.000
0.539	3.000	4.000
0.275	3.000	5.000
0.086	0.000	7.000
0.083	1.000	7.000
0.071	1.000	6.000
0.069	1.000	4.000
0.063	6.000	7.000
0.060	1.000	3.000
0.051	4.000	7.000
0.048	0.000	3.000
0.045	0.000	1.000
0.041	5.000	7.000
0.041	4.000	6.000
0.039	0.000	6.000
0.034	0.000	4.000
0.032	3.000	7.000
0.032	7.000	8.000
0.032	3.000	6.000
0.030	1.000	5.000
0.026	0.000	2.000
0.025	5.000	6.000
0.024	0.000	5.000
0.016	5.000	8.000
0.016	0.000	8.000

```
0.012   2.000   3.000
0.009   1.000   2.000
0.008   4.000   8.000
0.007   2.000   4.000
0.007   2.000   6.000
0.006   3.000   8.000
0.005   2.000   7.000
0.004   6.000   8.000
0.003   1.000   8.000
0.002   2.000   5.000
0.001   2.000   8.000
```

The spanning tree found for HepatitisC data set
```
0.606   4.000   5.000
0.539   3.000   4.000
0.086   0.000   7.000
0.083   1.000   7.000
0.071   1.000   6.000
0.069   1.000   4.000
0.032   7.000   8.000
0.026   0.000   2.000
```
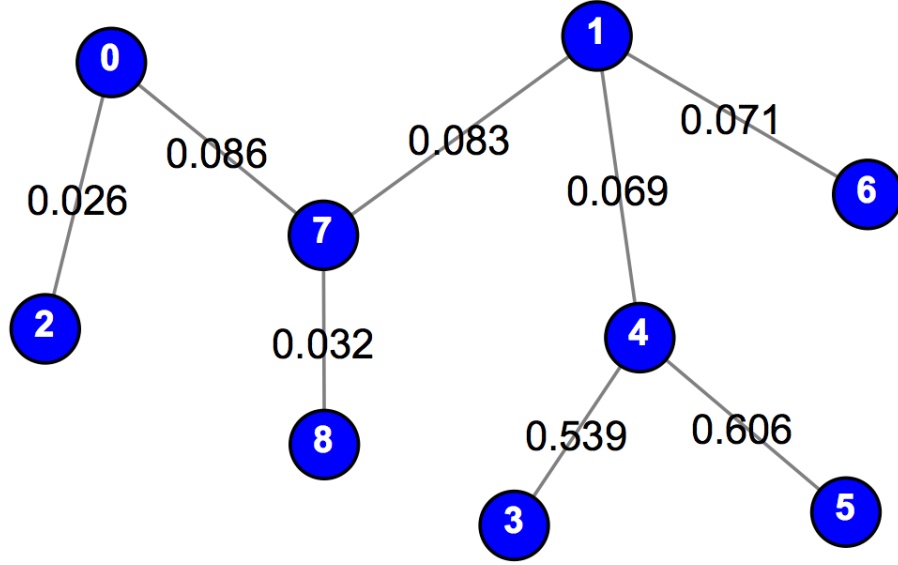
Figure 1: Maximally Weighted Spanning Tree obtained from HepatitisC data set.

2 Maximally Weighted Spanning Tree

See Figure 1 for the maximally weighted spanning tree we obtained. Nodes are coloured blue and indexed from 0 to 8; whilst edges are grey with the dependency between the two nodes connected by the edge written on it.