# Pruning Lab

*Please turn in a professional-looking report. A sloppy paper or failure to follow directions in other ways will lose you points on your report.*

## Algorithm (20 pts)

*A short (less than one page) description of how your algorithm works.*

*Input: Bayesian network, query variables, evidence variables*

*Output: A sub-network that does not contain any variables not needed for the query*

*Not necessary to build a parser. But see* [*Dot format*](http://www.graphviz.org)*.*

## Small Graphs (10 pts)

* *Influence that flows forward (i.e. )*
* *Influence that flows backward (i.e)*
* *Influence that flows through "v" structures (i.e. )*
* *Influence that flows through "y" structures (i.e. and )*
* *Influence that flows through "inverted-v" structures (i.e. )*
* *Mixed sequences of these structures*
* *Multiple Evidence nodes*
* *Multiple Query nodes*
* *Multiple paths from the Evidence to the Query, some active, some not.*

*Correctness of algorithm is worth 30 pts, determined by demonstrations in the paper. Be sure you are convincing!*

## Medium Graphs (10 pts)

*More than 10 nodes.*

## Large Graphs (10 pts)

*How big a network can your code effectively work on?*

## Big-O Analysis (10 pts)

*What is the Big-O of your algorithm?*

## Summary (5 pts)

*Thoughts on your algorithm and why it is important.*

## Source Code