Assignment 5

1.) **(5 pts.)** Compete in the Kaggle *Titanic: Machine Learning from Disaster* competition using decision tree, random forest, or gradient boosting models.

https://www.kaggle.com/c/titanic

To receive full credit, you must score at least 0.79426 correct classification. You may receive one point extra credit for beating the stated benchmark.

2.) **(5 pts.)** Compete in the Kaggle *Digit Recognizer* competition using neural network models.

https://www.kaggle.com/c/digit-recognizer

To receive full credit, you must score at least 0.95343 correct classification. You may receive one point extra credit for beating the stated benchmark.

Turn in only one document to black board.

If you choose to use SAS Enterprise Miner, this will be a Word document with the screenname you choose for each competition and a screenshot of your modeling diagram(s).

If you choose to use Python, R, or SAS code, turn in your code with your chosen screennames in the comments.

For those of you using SAS Enterprise Miner, you can use the following code to create your submissions automatically after the Score node in a SAS Code node.

```
/* titanic */
%let submission_file = ;
data _null_;
       length line $25;
       file "&submission_file";
       if _n_ = 1 then do;
              line = 'PassengerId,Survived';
              put line;
       end;
       set &EM_IMPORT_SCORE;
       line = PassengerId||','||EM_CLASSIFICATION;
       put line;
run;

/* digits */
%let submission_file = ;
data _null_;
       length line $25;
       file "&submission_file";
       if _n_ = 1 then do;
              line = 'ImageId,Label';
              put line;
       end;
       set &EM_IMPORT_SCORE;
       line = put(_n_, best.)||','||EM_CLASSIFICATION;
       put line;
run;
```