Caret / Recursive Partitioning

Your Name Here

Today's Date

Exercise 1: caret/logistic regression (5 points)

Rebuild your logistic regression model from the previous week, this time using the `caret` package.

- Calculate the training or apparent performance of the model.
- Calculate an unbiased measure of performance
- Create a ROC Curve for your model

Show all work.

```
# Your Work Here
```

Exercise 2: caret/rpart (5 points)

Using the `caret` and `rpart` packages, create a **classification** model for flight delays using your NYC FLight data. Your solution should include:

- The use of `caret` and `rpart` to train a model.
- An articulation of the the problem your are
- An naive model
- An unbiased calculation of the performance metric
- A plot of your model – (the actual tree; there are several ways to do this)
- A discussion of your model

Show and describe all work

```
# Your Work Here
```

Questions:

- Discuss the difference between the models and why you would use one model over the other?
- How might you produce an ROC type curve for the *rpart* model?