**Sports Analytics Spring 2015**

**HW4 Assignment**

This assignment is **required.** It is worth **10 points** (10% of your course grade).

**Collaboration Policy:**

This assignment can be completed individually or in a team of two students. You may use any resource (classmates, instructor, other faculty, the text, online, etc.) to complete this assignment, but be sure to document any help you receive (in your email when you submit the assignment).

**Description:**

You’ve probably heard the old adage that football teams need to run in order to setup the pass. Or maybe you’ve heard a stat something like: “NFL teams that run 20 or more times in a game win 70% of the time.” Clearly, something is fishy with these ideas. Football Outsiders wrote an interesting article on this issue in 2003 called *The Establishment Clause* (link below).

<http://www.footballoutsiders.com/statanalysis/2003/establishment-clause>

Your task with this assignment is to analyze the relationship between winning, running, and when in the game teams choose to run. Ultimately, your analysis will consist of a single, insightful “elevator slide”.

**Elevator Slide:**

An elevator slide usually consists of (1) a research question or very short problem statement, (2) a few bullets that highlight key details like important assumptions or critical model details, (3) an insightful graph that **shows** the answer to the question, and (4) a bumper sticker with the key take away (and/or recommendation).

**Data:**

Use the three data files provided to do your analysis. The first two files are play-by-play data for the entire 2013 and 2014 seasons respectively. The third contains definitions for the labels in the play-by-play data files.

**Turn-In Instructions:**

Submit your elevator slide using the “HW4-<YOURLASTNAMES>.PPT” naming convention via email to your instructor by 1600 on 14 April.

**Scoring:**

Your assignment will be graded based on:

1. Cool factor: Is your analysis interesting?
2. Clarity: Did you clearly explain the issue you are trying to analyze?
3. End game: Does you analysis address the issue as promised?
4. Graph: Is it interesting and understandable, with axes labels (and legend if more than one series)?
5. Admin: Does your slide look professional, with consistent formatting, font, punctuation, and capitalization?