STAT5P87 **Week 3 Lab**

Due Date: Thursday January 23rd

- **Instructions:**
  - Labs should be submitted electronically as an **single** R script (.R file) on Brightspace.
    - Please be sure to use R version 3.6.1 or greater.
    - Solutions should not use any additional packages.
    - I will make sure that R can find and load the required data sets, otherwise the code should run as submitted.
  - There is no coding style requirement for the lab.

1. In this lab we will implement the least-angle regression algorithm to solve for the LASSO path (see accompanying slides). Consider a LASSO regression model for `lpsa` as an output and `lcavol`, `lweight`, `age` as inputs (data available in 'prostate-cancer-data.csv' on Brightspace). The goal of the lab is the implement the LAR algorithm, and use it to recreate the LASSO path figure shown below: