APSC 1001 HW2 Due: 10/9/15

1: Curve Fitting

(a) Import the data from the file "Data_HW2.csv", which can be found on blackboard. You can use the following code:

```
data = csvread('Data_HW2.csv', 1,0);
x1 = data(:,1);
y1 = data(:,2);

x2 = data(1:100, 4);
y2 = data(1:100, 5);

plot(x1,y1)
figure
plot(x2, y2)
```

Here, you are importing the data, then saving each column as a separate array. X1 and Y1 contain one set of data, and X2 and Y2 contain a separate set of data.

(b) For each data set, use the curve fitting tool to find a function that approximates the data. Write a script file that can load the data from the .csv, then plot both the data and the approximation using the coefficients you have found. Plot the data as discrete points, and your curve as a continuous function. Report on your goodness of fit, and give one scenario where the data may have come from.

Directions You must turn this assignment in to Blackboard as a published pdf. Create a script to complete the homework assignment, taking care to control what is output to the command window. The code should be **well commented** so that it is easy to follow along. See directions for publishing to pdf below.

1. Go to the publish tab in MATLAB
2. Select the drow down under 'Publish'
3. Edit Publishing Options
4. Output file format should be '.pdf'. This is the only change you should need to make.
5. Press publish, and save the resulting pdf with your name and the assignment number in the title.