

Homework 5 WriteUp

Polyfit.py

The estimated equations are:

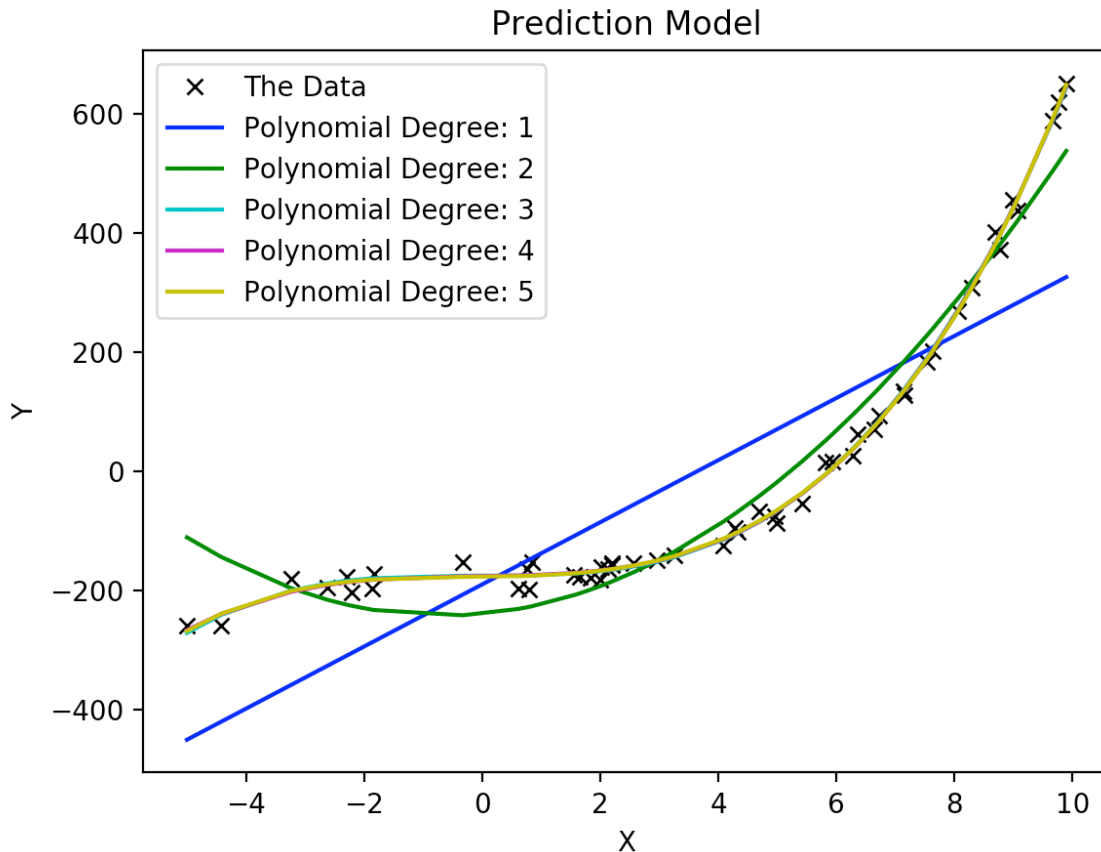
$$y_1 = 52.16x - 189.87$$

$$y_2 = 7x^2 + 9.3x \pm 239.3$$

$$y_3 = 0.82x^3 + 0.26x^2 - 0.01x \pm 175.3$$

$$y_4 = 0.006x^4 + 0.755x^3 + 0.235x^2 + 1.18x - 175.9$$

$$y_5 = 0.00085x^5 - 0.0047x^4 + 0.753x^3 + 0.526x^2 + 0.966x - 176.83$$



According to the graph above, the best polynomial degree for the provided data is 5 since it has the lowest error between the data and the estimated polynomial function.

The predicted value for the polynomial with a degree of 5 is -166.82