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Problem1_writeup

Estimated Functions:

$\widehat{y_1}(x) = a_1 x + b$ *(write numerical values for a_i's and b's)*

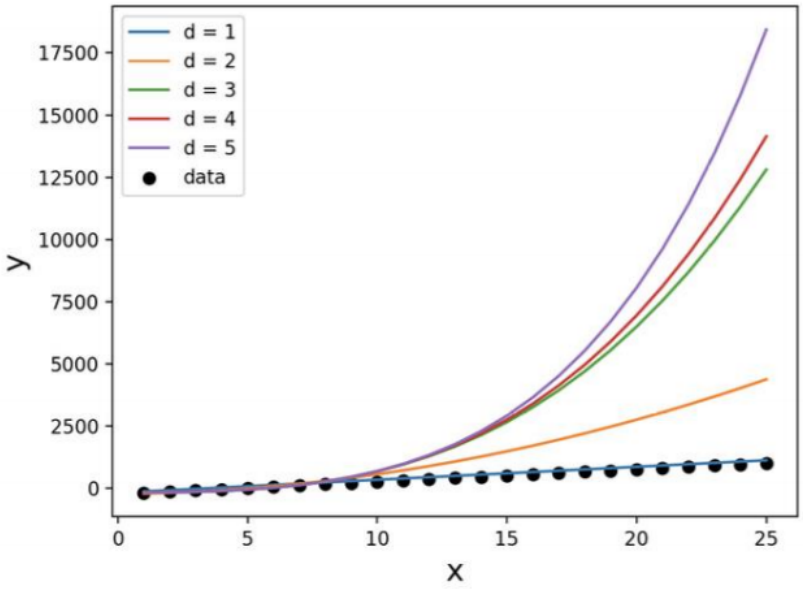
$\widehat{y_2}(x) = a_2 x^2 + a_1 x + b$

$\widehat{y_3}(x) = a_3 x^3 + a_2 x^2 + a_1 x + b$

$\widehat{y_4}(x) = a_4 x^4 + a_3 x^3 + a_2 x^2 + a_1 x + b$

$\widehat{y_5}(x) = a_5 x^5 + a_4 x^4 + a_3 x^3 + a_2 x^2 + a_1 x + b$

Data Visualization: *(insert plot obtained from data in poly.txt)*



(Discuss relationship of data and insert numerical value of c calculated from best regression)

The data seems to best follow a first order polynomial (i.e., a line) which can be seen from the low error between the estimated regression function, $\widehat{y_1}(x)$, and the data in the plot above.

If we measured a new data point, $x = 2$, the corresponding predicted value would be $\widehat{y_1}(2) = c$.