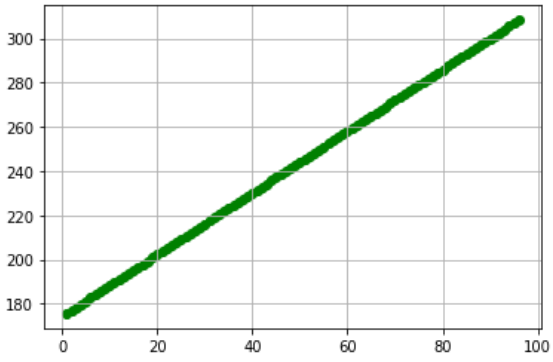
Andrew Bechdolt
EE 291
Dr. Livani
29 November 2019
Project 2

Part 1:

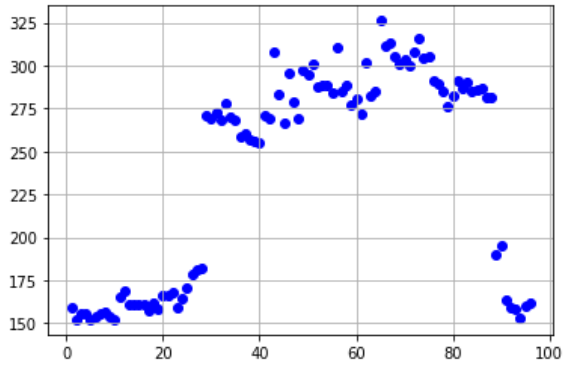
a) Regression Model Parameters:
   Intercept: 174.1883
   Coefficient: 1.3968

b) Total Squared Error of prediction for day 2
   a. Squared error of Prediction
      Total Squared Error = 2726.13931

c) Predicted vs Actual values of Electricity Consumption

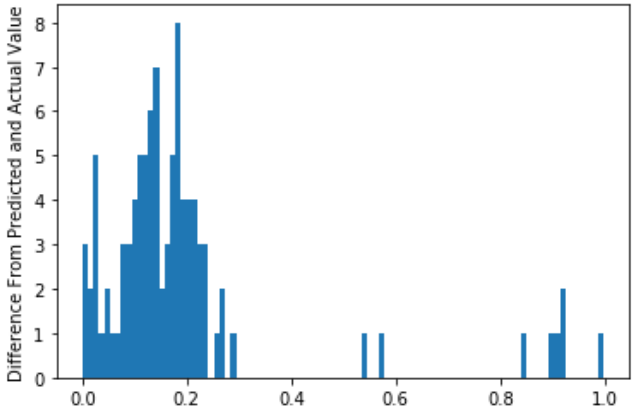


Predicted Value



Actual Value

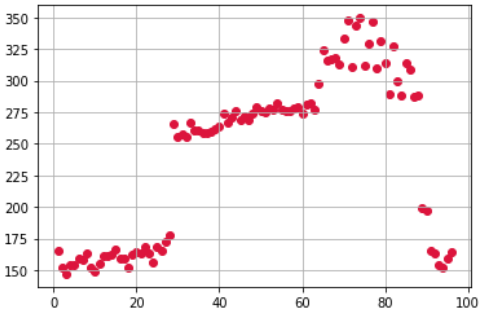
d) Error between predicted and actual values of consumption



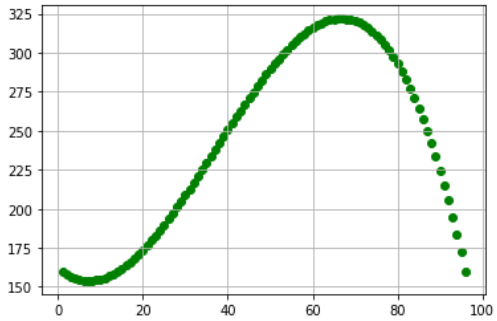
Error between linear and actual values

Part 2:

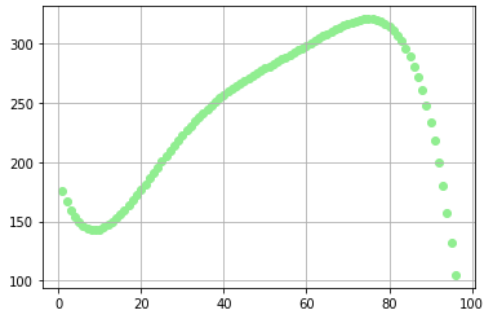
a) Predicted and actual values of consumption



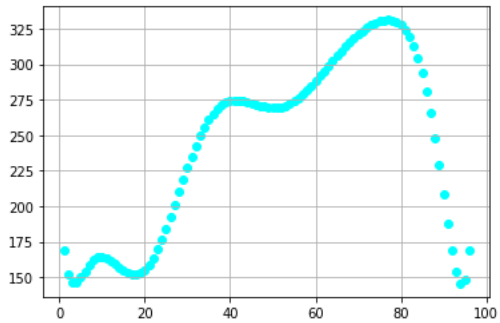
Day 1 Values



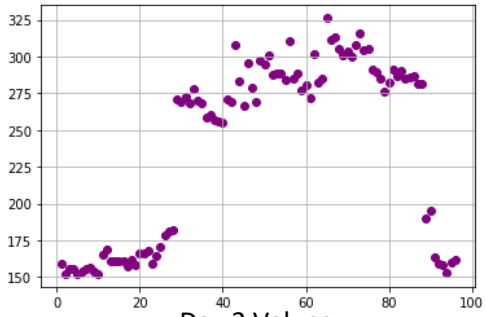
3 Degree Interpolation Day 1



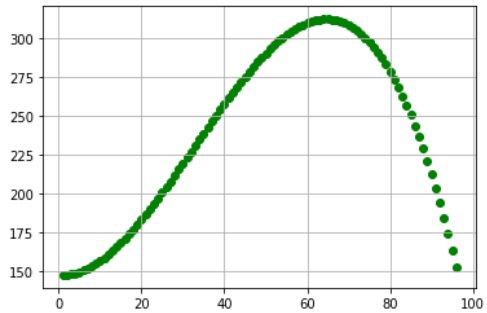
5 Degree Interpolation Day 1



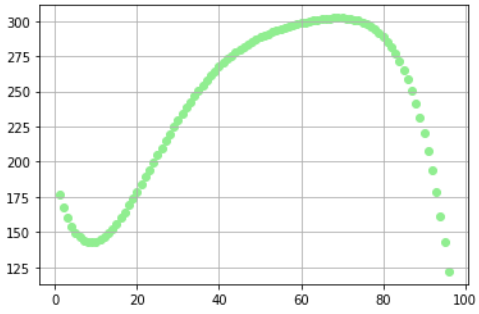
10 Degree Interpolation Day 1



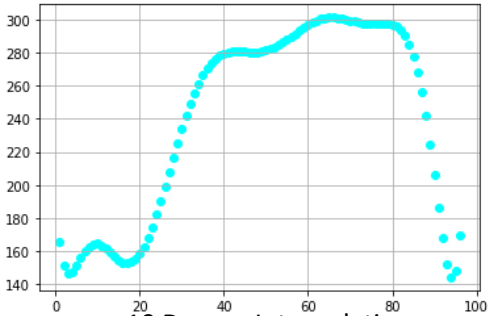
Day 2 Values



3 Degree Interpolation Day 2



5 Degree Interpolation



10 Degree Interpolation

b) Total squared error for day 2

3 Degrees

Total Squared Error = 498.480247657023

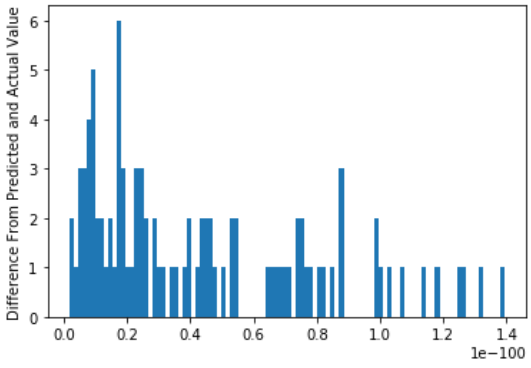
5 Degrees

Total Squared Error = 390.65167724405757

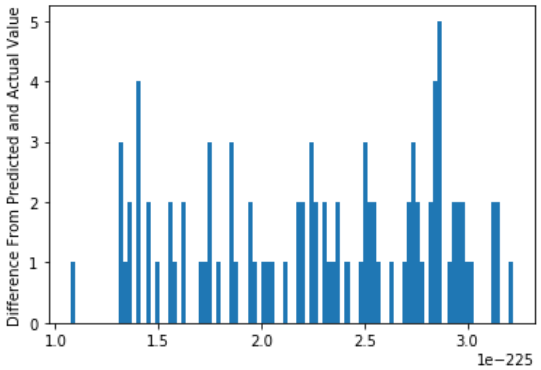
10 Degrees

Total Squared Error = 240.64122075006279

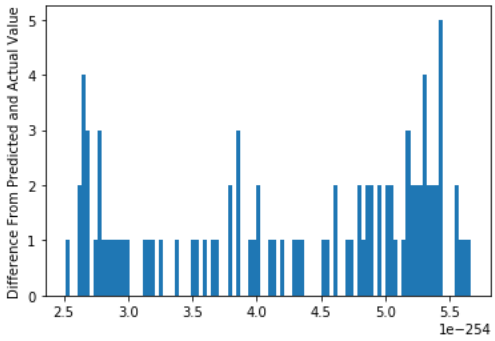
c) Histogram of error between predicted and actual values



Histogram of Error 3 Degrees



Histogram of Error 5 Degrees



Histogram of Error 10 Degrees