

1.C. Yes overfitting has been the main issue. I tried training with lower iterations and that improved results. Interestingly, first order fitting made the most accurate prediction. These are the results:

1st deg model accuracy for training(R2): 0.783

1 deg model accuracy for test data (R2): -922.884

2nd deg model accuracy (R2): 0.491

2 deg model accuracy for test data (R2): -1045.720

3rd deg model accuracy (R2): 0.506

3 deg model accuracy for test data (R2): -1257.004

4th deg model accuracy (R2): 0.535

4 deg model accuracy for test data (R2): -1193.823

2.B I still have some bugs with problem 2 implementation.