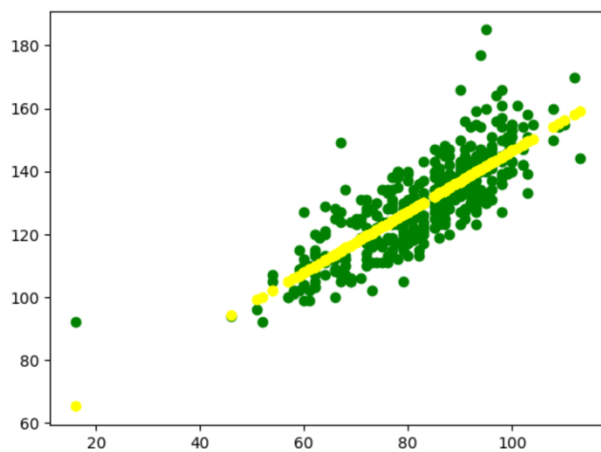


Introduction to Machine Learning Homework Assignment 1

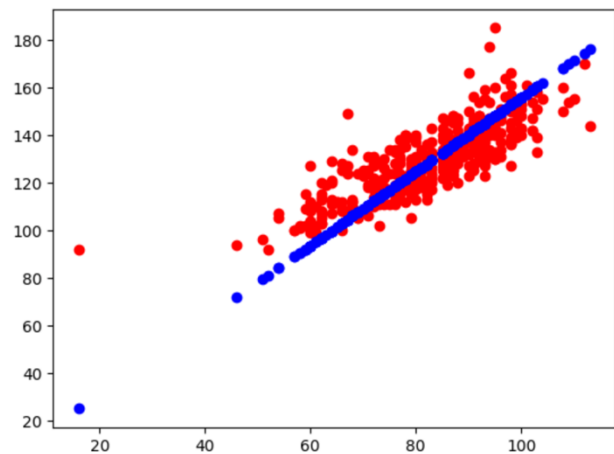
Kenneth Chandra 110006161

During my progress with this assignment, I encountered several difficulties which impeded my progress noticeably. I wasn't entirely familiar with the topics discussed at the beginning as a result, I had to scour the internet for more resources to educate myself on the material and familiarize myself with the mathematics involved. After studying up, I had to refamiliarize myself with the Python environment, since I spent a lot of time using different languages, instead of Python.

The implementation of linear regression for this assignment was based on the theory which Professor Kuo introduced in class. With the general formula $y = mx + c$, I developed several functions that execute different methods, that being Ordinary Least Squares and Gradient Descent. Below are the plots for each method:



Ordinary Least Squares



Gradient Descent

The yellow and blue lines symbolize the predicted values based of the model, while the green and red points symbolize the original values.

This assignment was fun because I got first-hand experience with machine learning, which is a specialization of programming I find really intriguing.