Assignment: Linear Regression

Submit your plots, descriptions, and python scripts.

1. **Linear regression**

   Use `x` and `y` in `linear_regression_test_data.csv` for writing and debugging your code. For both of the Python classes you implement, return the intercept θ_0, the coefficient θ_1.

   (a) (30 points) Implement a Python class to do linear regression using the analytical solution to least-squared problems.

   (b) (65 points) Implement a Python class for gradient descent-based linear regression. Use $\Delta J = 0.00001$ as the stopping criterion.

   (c) (5 points) Compare your results from (a) and (b). Do you get similar estimates?