

21.10.15 Project 4

1) What are X , y , and β ?

↳ X is a matrix of the feature vectors from our database. In this case, we are only using 75% of that data of feature vectors.

↳ y is a column vector of the target values corresponding to each row in X , or feature vector. It is the actual value of what we are trying to predict using X .

↳ β is a column vector used to help get our prediction values with X . We multiply β and X in order to get that predicted value to see if it closely matches y . The values in β are "knobs" that can be tuned in order for our predicted values to be as close as possible to y .

2) How can you use β to make predictions?

↳ We use β as part of our Objective Function that helps us get our predictions. We basically times β by X and then minus y . After that, we square the norm of it divide by the number of rows in X or the number of feature vectors.

3) Which method gives you a lower value of L ?

↳ Using the normal equation.

4) Which method gives you a better mean squared error?

↳ Using the normal equation.

5) Which method is faster?

↳ Using the normal equation.