

# CS 5001 Deep Learning - Fall 2017

## Homework 1

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With initial weights  $w_0 = 2200$  and  $w_1 = 200$  and employing linear regression with one variable yields the results shown in Table 1.

As can be seen in Figure 1, the linear regression line follows the general trend of the points.

Table 1: Linear Regression Results

Learning rate	.001
Number of Iterations	1500
Sum of Squares Error	133,987,898
Initial Weights	
$w_0$	2200
$w_1$	200
Final Weights	
$w_0$	2211.771589
$w_1$	234.991411

Figure 1: Linear Regression with Original Points

