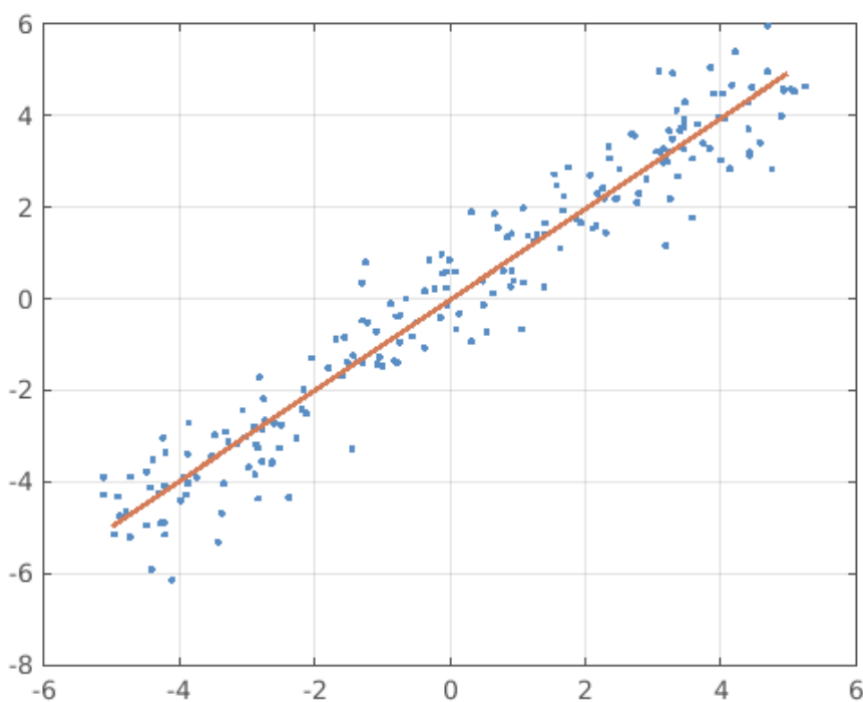


Linear Regression

Given a set of approximate x and y coordinates of points in a plane, determine the best fitting line in the least squares sense. Compute a and b. That is, write a function called **lin_reg** that takes two row vectors of the same length as input and returns two scalars, a and b specifying the line, as output arguments. Here is an example run:

```
>> [a b] = lin_reg([0 2],[0 2])  
  
a =  
    1  
b =  
    0
```

Here is what you should see when you hit the "Run Function" button below:



Hint: reformulate the problem so that you can use MATLAB's built-in linear equation solving support, i.e., the y , a and b are the unknowns and not x what we usually have in a system of linear equations. So, there is so

Function ?

[Save](#)[Reset](#)[MATLAB Documentation \(https://www.mathworks.com/help/\)](https://www.mathworks.com/help/)

1

Code to call your function ? Reset

```
1 v = rand(1,200) * 10 - 5;  
2 x = v + randn(1,length(v)) / 2;  
3 y = v + randn(1,length(v)) / 2;  
4 [a b] = lin_reg(x,y)  
5 plot(x,y, '.');  
6 grid on  
7 hold on  
8 plot([-5 5],a*[-5 5]+b, 'lineWidth',2);
```

 Run Function**Assessment:**

Submit



Simple points

Random points

Big data points

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