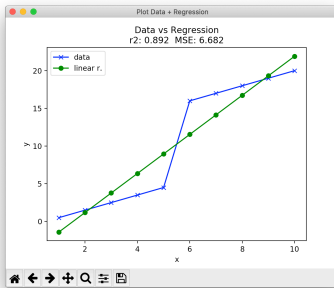


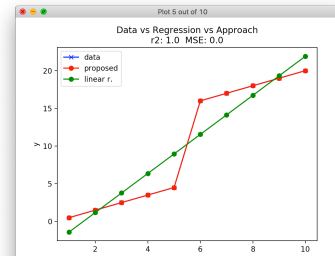
Example 1: Easy 2 different linear functions. X.shape = (10,1) and Y.shape = (10,).

Solving with SML with left = LinearRegression and right=LinearRegression



x	y
1	0.5
2	1.5
3	2.5
4	3.5
5	4.5
6	16
7	17
8	18
9	19
10	20

$y = x - 0.5$
 $y = x + 10$

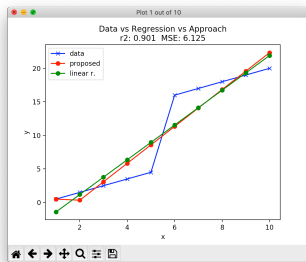


Solution:

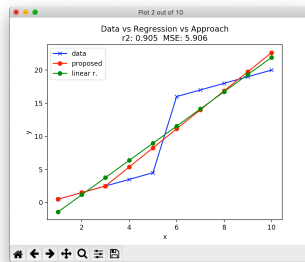
Algorithm applied once

Output: 2 linear regressions (cut off $X[:,0] \leq 5$
 r^2 from 0.89 to 1.00

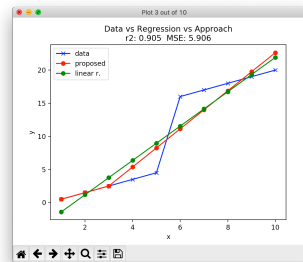
First (and only) Run:



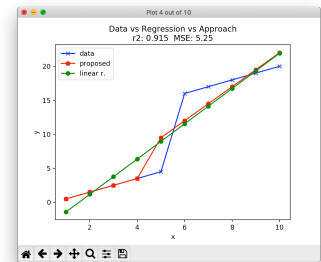
Iteration 1
 r^2 : 0.901
 LEFT: $0x + 0.5$
 RIGHT: $2.75x - 5.166$



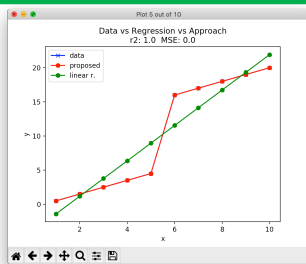
Iteration 2
 r^2 : 0.9048
 LEFT: $1x - 0.499$
 RIGHT: $2.875x - 6.125$



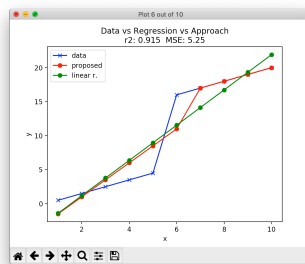
Iteration 3
 r^2 : 0.9048
 LEFT: $1x - 0.499$
 RIGHT: $2.875x - 6.125$



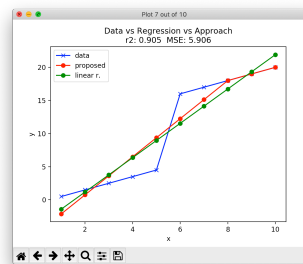
Iteration 4
 r^2 : 0.915
 LEFT: $1x - 0.500$
 RIGHT: $2.5x - 3.0$



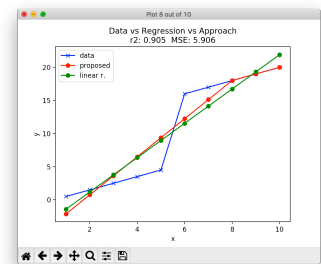
Iteration 5
 r^2 : 1.000
 LEFT: $1x - 0.5$
 RIGHT: $1x + 9.999$



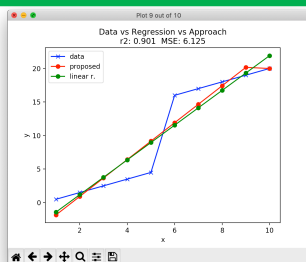
Iteration 6
 r^2 : 0.915
 LEFT: $2.5x - 4.0$
 RIGHT: $1x + 9.999$



Iteration 7
 r^2 : 0.9048
 LEFT: $2.875x - 4.999$
 RIGHT: $1x + 10.000$



Iteration 8
 r^2 : 0.9048
 LEFT: $2.875x - 4.999$
 RIGHT: $1x + 10.000$



Iteration 9
 r^2 : 0.901
 LEFT: $2.75x - 4.583$
 RIGHT: $0x + 20.0$