Linear Regression With Graphical User Interface

1 Test GUI with an example 1

Find the least squares fit of a straight line to the given data:

x	5	10	15	20	25
y	-0.45	-21.13	-43.5	-72.53	-98.17

plot the data points vs. the least squares solution, and find the correlation coefficient.

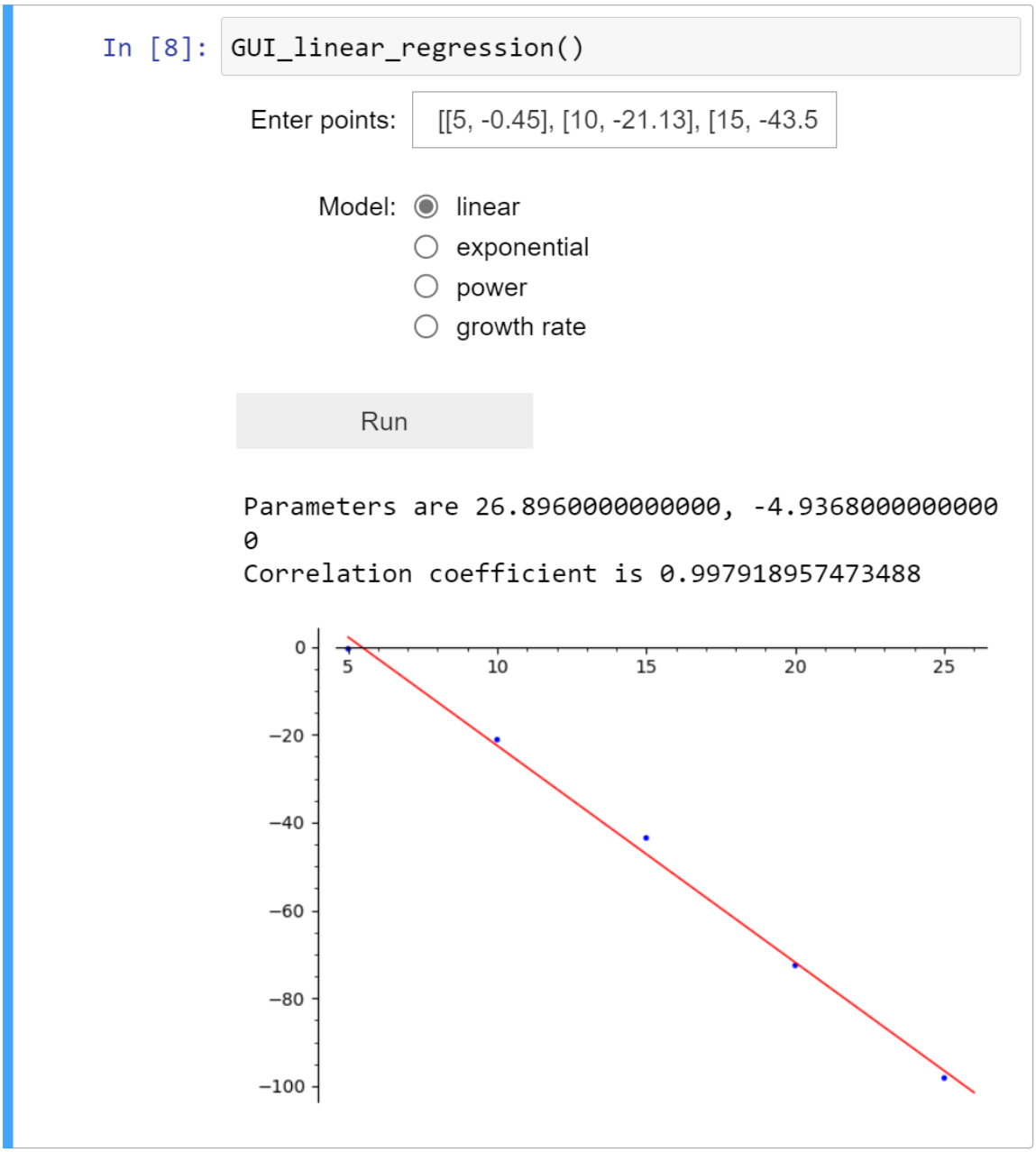

Figure 1: GUI - example 1

2 Test GUI with an example 2

Find the least squares fit of the exponential model to the given data:

x	1	2	3	4	5	6	7	8	9	10
y	620.00	621.88	899.80	1239.93	1970.63	2089.04	2751.31	3954.92	5893.7	8513.1

plot the data points vs. the least squares solution, and find the correlation coefficient.

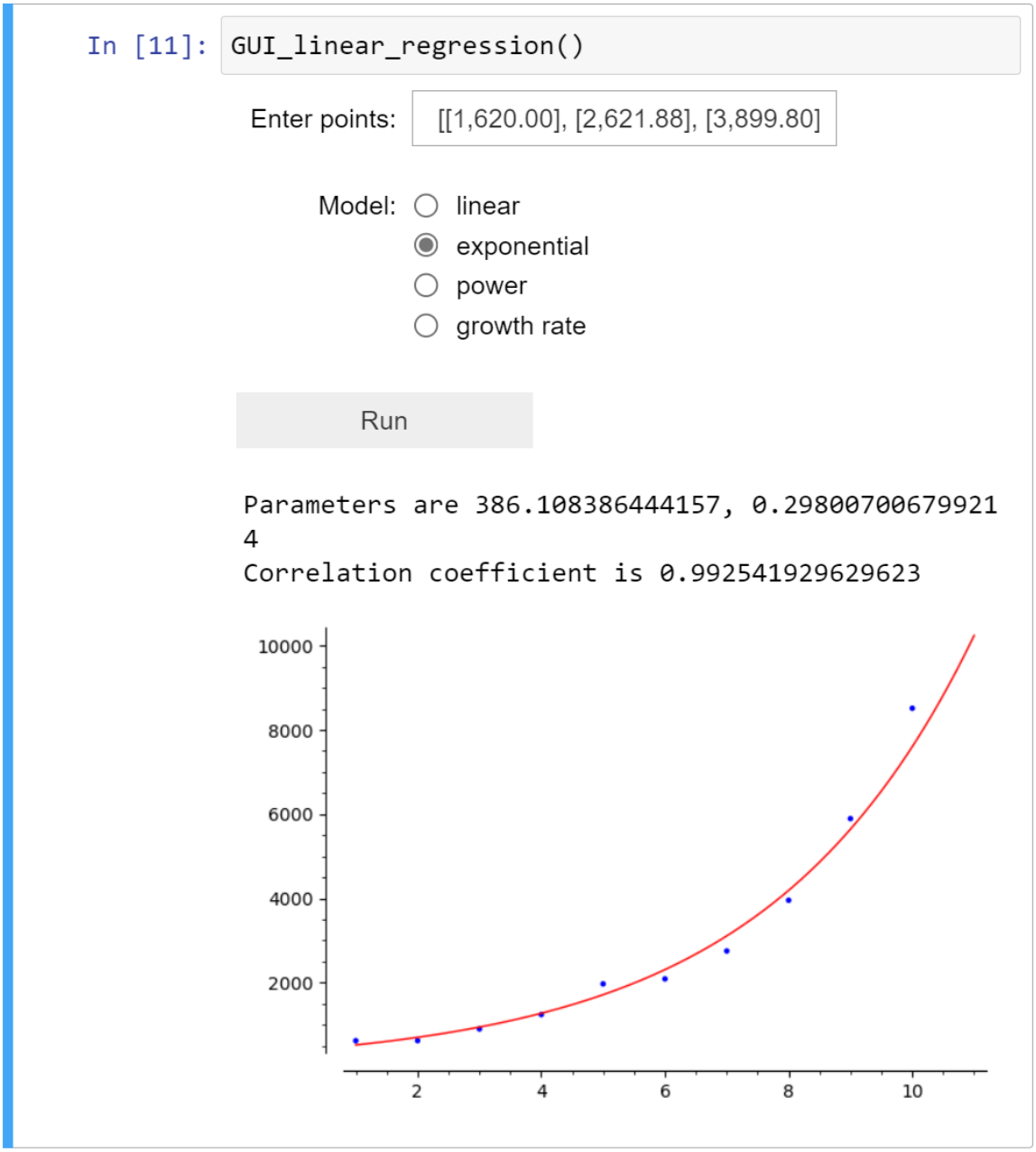

Figure 2: GUI - example 2

3 Test GUI with an example 3

Find the least squares fit of the power model to the given data:

x	1	2	3	4	5	6	7	8	9	$\cdots$
y	0.339	2.082	6.731	16.799	35.423	75.224	117.506	162.077	197.054	$\cdots$

$\cdots$	10	11	12	13	14	15
$\cdots$	337.557	405.831	603.241	643.630	830.005	879.403

plot the data points vs. the least squares solution, and find the correlation coefficient.

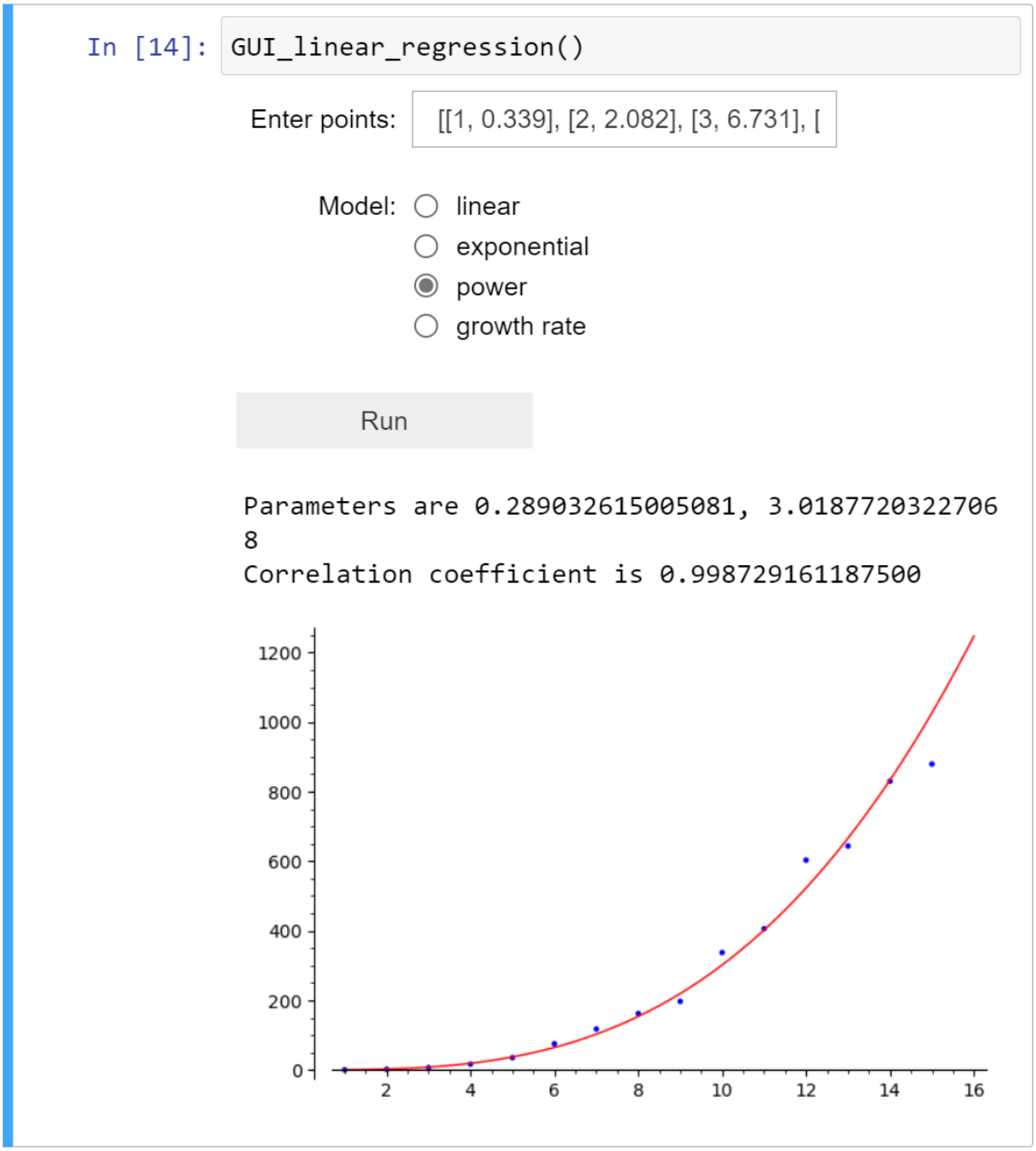

Figure 3: GUI - example 3

4 Test GUI with an example 4

Find the least squares fit of the growth rate model to the given data

x	1	3	5	7	9
y	0.85	1.4	1.73	1.68	1.96

plot the data points vs. the least squares solution, and find the correlation coefficient.

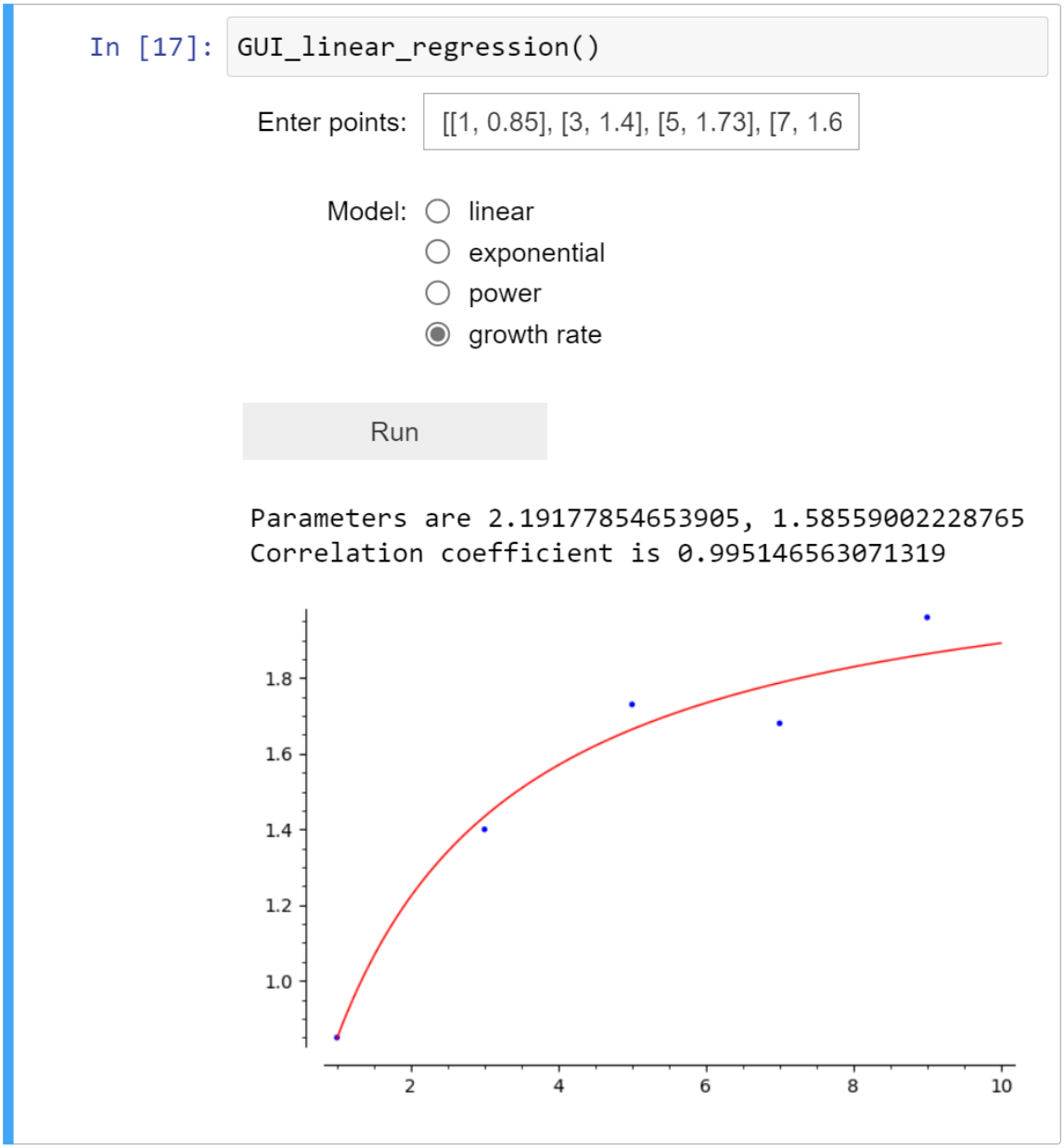

Figure 4: GUI - example 4