Assume data.csv is the observed data in form of input-output pair. Please use the family of exponential function, with , for the regression analysis and find the optimal coefficients, and . You may use JavaScript, python, or other language to solve this problem. In addition, compare the difference of estimation error for linear regression and exponential regression.

假設 data.csv 是以輸入-輸出對形式觀察到的數據。

利用y=αe^βx（其中β<0）進行回歸分析，並找出最優係數 α 和 β。

JavaScript、Python 或其他語言來解決此問題。

此外，比較**線性回歸和指數回歸**的**估計誤差**之間的差異。

首先 Data.csv中的X,Y陣列如下

let x=[0,1,2,3,4,5,6,7,8,9,10]

let y=[9735,4597,2176,1024,483,229,108,52,24,11,6]

linear regression

0 9735

linearexponential regression.js:12

1 4597

linearexponential regression.js:12

2 2176

linearexponential regression.js:12

3 1024

linearexponential regression.js:12

4 483

linearexponential regression.js:12

5 229

linearexponential regression.js:12

6 108

linearexponential regression.js:12

7 52

linearexponential regression.js:12

exponential regression.

a 9620.329408784626 b -0.7461780351670065

linearexponential regression.js:30

a 9620.329408784626 b -0.7461780351670065

linearexponential regression.js:21

0 9620.329408784626

linearexponential regression.js:22

1 4561.723310041821

linearexponential regression.js:22

2 2163.056863559917

linearexponential regression.js:22

3 1025.6683005508223

linearexponential regression.js:22

4 486.34665157320825

linearexponential regression.js:22

5 230.61360614288708

linearexponential regression.js:22