

Linear models

Quiz, 3 questions

1
point

1.

Consider a vector $(1, -2, 0.5)$. Apply a softmax transform to it and enter the first component (accurate to 2 decimal places).



0.60

1
point

2.

Suppose you are solving a 5-class classification problem with 10 features. How many parameters a linear model would have? Don't forget bias terms!

55

1
point

3.

There is an analytical solution for linear regression parameters and MSE loss, but we usually prefer gradient descent optimization over it. What are the reasons?

Linear models



Gradient descent is a method developed especially for MSE loss



Gradient descent doesn't require to invert a matrix



Gradient descent can find parameter values that give lower MSE value than parameters from analytical solution



Gradient descent is more scalable and can be applied for problems with high number of features



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