| Lab Class 2 | | | | | |
|---|---|---|---|---|---|
| index | Number | Question | Correct (a fraction) | Max Mark | Comments |
| 1_1 | 1_1 | If you find data available on the internet, can you simply use it without consequence? | 3 | 3 | |
| 1_2 | 1_2 | If you are given data by a fellow researcher can you publish that data on line? | 2 | 2 | |
| 2_1 | 2_1 | The movies data is now in a data frame which contains one column for each user rating the movie. Have a look at the data, what do the entries with 'NaN' in mean? | 5 | 5 | |
| 3_1 | 3_1 | The dataframes Y_with_NaNs and Y contain the same information but organised in a different way. Explain what is the difference. | 5 | 5 | |
| 3_2 | 3_2 | We have also included two columns for ratings in dataframe Y, ratingsorig and ratings. Explain the difference. | 5 | 5 | |
| 4_1 | 4_1 | Write your answer in the box below, and explain which differentiation techniques you used to get there. | 10 | 10 | |
| 4_2 | 4_2 | Explain which differentiation techniques you used to get there. | 5 | 5 | Good explanations! |
| 5_1 | 5_1 | What happens as you increase the number of iterations? | 5 | 5 | |
| 5_2 | 5_2 | What happens if you increase the learning rate? | 3 | 5 | It goes faster initially, but then later in it takes steps that are big and you go up the gradient. |
| 6_1 | 6_1 | What happens by the number of iterations or the learning rate | 2 | 2 | |
| 6_2 | 6_2 | Return the predictions and the absolute error | 6 | 8 | Predictions and errors are not returned by your function. |
| 6_3 | 6_3 | The predictions and the absolute error should be added as additional columns to the dataframe Y | 5 | 5 | |
| 7_1 | 7_1 | Use stochastic gradient descent | 6.5 | 10 | It is correct to upeate U and V for each training example. However, you should iterate over all traning samples instead of selecting one randomly. |
| 7_2 | 7_2 | Monitor the objective function after every 1000 updates to ensure that it is decreasing | 5 | 5 | |
| 7_3 | 7_3 | Plot the movie map and the user map in two dimensions | 5 | 5 | |
| 7_4 | 7_4 | Provide three observations about these map | 2 | 5 | You gave your observations with respect your plotting. However the SGD function was not exactaly correct and therefore you could not provide correct observations. |
| 8_1 | 8_1 | Use stochastic gradient descent to learn U and V for the MovieLens 100k data. | 6 | 10 | Good to use the full dataset. For SGD, see comments in 7_1. |
| 8_2 | 8_2 | Plot the map of the movies when you are finished. | 5 | 5 | |
| | | **Mark from 100** | 85.5 | 100 | |
| | | **Mark from 5** | 4.275 | 5 | |