



# Implementing logistic regression from scratch

9 questions

1.

**Are you using GraphLab Create? Please make sure that**

**1. You are using version 1.8.3 of GraphLab Create.** Verify the version of GraphLab Create by running

```
graphlab.version
```

inside the notebook. If your GraphLab version is incorrect, see this post (<https://www.coursera.org/learn/ml-classification/supplement/LgZ3I/installing-correct-version-of-graphlab-create>) to install version 1.8.3. **This assignment is not guaranteed to work with other versions of GraphLab Create.**

**2. You are using the IPython notebook** named module-3-linear-classifier-learning-assignment-blank.ipynb obtained from the associated reading.

This question is ungraded. Check one of the three options to confirm.

- ☐ I confirm that I am using the right version of GraphLab Create and the right IPython notebook.
- ☐ I am using SFrame and NumPy only.
- ☐ I am using other tools, and I understand that I may not be able to complete some of the quiz questions.

2.

How many reviews in **amazon\_baby\_subset.gl** contain the word **perfect**?

2955

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3.

Consider the **feature\_matrix** that was obtained by converting our data to NumPy format.

How many features are there in the **feature\_matrix**?

194

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4.

Assuming that the intercept is present, how does the number of features in **feature\_matrix** relate to the number of features in the logistic regression model? Let  $x$  = [number of features in feature\_matrix] and  $y$  = [number of features in logistic regression model].

- ☒  $y = x - 1$
  - ☐  $y = x$
  - ☐  $y = x + 1$
  - ☐ None of the above
- 

5.

Run your logistic regression solver with provided parameters.

As each iteration of gradient ascent passes, does the log-likelihood increase or decrease?

- ☐ It increases.
  - ☐ It decreases.
  - ☐ None of the above
-

We make predictions using the weights just learned.

6. How many reviews were predicted to have positive sentiment?

7.

What is the accuracy of the model on predictions made above? (round to 2 digits of accuracy)

8.

We look at "most positive" words, the words that correspond most strongly with positive reviews.

Which of the following words is **not** present in the top 10 "most positive" words?

- ☒ love
- ☐ easy
- ☐ great
- ☐ perfect
- ☐ cheap

9.

Similarly, we look at "most negative" words, the words that correspond most strongly with negative reviews.

Which of the following words is **not** present in the top 10 "most negative" words?

- ☐ need
- ☒ work

- ☐ disappointed
  - ☐ even
  - ☐ return
- 

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