

Department of Computer Science
and Software Engineering

Artificial Intelligence

COMP 472

Assignment 1

Experiments with Machine Learning

Delivered: Friday February 19th 2021

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Task 4

Naïve Bayes:

1. Line 11904

the text is ok and the way the story is cut up in frames and assembled is competent , but the drawings are the work of a hack , often tacky and always styleless and garishly colored . the costumes and settings are totally lacking in imagination and carry no semantic weight . the attempts to create a visual equivalent for the musical leitmotifs of the operas are too literal and very much in the spirit of a mechanical translation from opera to comic book . an affront to connoisseurs of either opera or comics or both . only valuable as a kitschy curiosity.

Sentiment: Negative

Predicted: Positive

This could be due to the fact that the review given was pretty neutral and didn't give any hint to a negative tone. Since Naïve bayes counts the number of times a word is used for pos/neg reviews, it's possible this specific case had more positive words than negative.

Some key words that could affect the prediction: **competent, imagination**

2. Line 11899

i was requested to write a review by amazon . i felt this request was premature since i used this product only for a month . so far i am quite satisfied with the user friendliness , price , and ability to use and clean the shaver in wet environment .

Sentiment: Positive

Predicted: Negative

Seems like the words used tend to be more negative than positive or when used in the test portion, the output sentiment was negative. Since Naïve bayes counts the number of times a word is used for pos/neg reviews, it's possible this specific case had more positive words than negative.

Some key words that could affect the prediction: **premature, Satisfied**

Base DT:

1. Line 11876

this book sucked . all the other people in my book group and i hated this book . there is only a stupid plot about a pig running away

Sentiment: Negative

Predicted: Positive

A lot of negative words appear in this specific review, but it might seem that more positive words like Pig have a stronger affect to the prediction.

Some key words that could affect the prediction: **Pig**

2. Line 11827

over the years at various jobs , i have seen this flashlight several times . it is abused and subjected to the most terrible chemical and physical abuse . it may end up looking beat up and yucky , but they always work , no matter what the contractor or whomever does to it . if you need a reliable flashlight for the toolbox , work truck , pick-up glove compartment , etc. , this is the only one you need . if you need a good flashlight at home , and tired of buying and throwing out all those junky flashlights from the grocery store , this one will be the last flashlight you will ever have to buy . i finally bought one just for my home , and i am only sorry i did not do this years ago (i am also happy to have one of these things that is not totally beat up like the one in my toolbox ; i refuse to replace it) . i like this version because it has a strong magnet , and you stick onto the refrigerator or the side of your truck . i also like that it has switch guards , so it will not be accidentally turned on because it is buried beneath 25# of stuff in your toolbox . one nit-picky complaint . it has a clip for a spare bulb behind the reflector . however , it comes empty and you have to supply your own , so buy a spare bulb at the same time you buy this flashlight .

Sentiment: Positive

Predicted: Negative

Some of the words used initially were pretty negative and could trick the DT to think that the review and sentiment is negative too.

Some key words that could affect the prediction: **abused, terrible, yucky, sorry**

Best DT:

1. Line 11907

(....) . it takes some getting used to , but after a couple of weeks it provides a very comfortable shave . i got razor burn on my neck for the first couple weeks , but i think i was pressing too hard like i had to with my old razor . just a light touch gives a close shave . the attachable sideburn trimmer does n't do a very good job in my opinion , but i kept my old razor that worked better for that purpose . the gel packs go pretty quickly , but maybe i 'm using too much . i 'm still trying to get the hang of it . it 's a different experience than your basic razor

Sentiment: Positive

Predicted: Negative

The overall review seems to be more negative than anything, but for some reason the sentiment was positive. I'd say the best DT predicted this one correctly based off of the review itself.

Some key words that could affect the prediction: **burn, hard, doesn't do a very good job, old, different**

2. Line 11853

this is a great camera . the quality is good and the camera is very durable . i 've accidentally dropped the camera several times , and it still works . however , i would suggest getting a memory card if you want to take more than 24 pictures at a time .

Sentiment: Positive

Predicted: Negative

The overall review seems pretty positive, but certain key words could give the illusion that the review might be indeed negative, thus tricking the prediction.

Some key words that could affect the prediction: **accidentally, dropped, however, suggest**