CENG463 - 2022 - HW2 Report
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My implementation takes “commentsReview” words as inputs. It cleans meaningless strings and punctioations which aren't useful for this task. It counts the words of a comment and tries to predict the rating. Depending on the prediction, it updates the weights. The model evolves (learns) with each training sample.

If I used other reviews as inputs and/or If I had more data, the accuracy would have improved. Accuracy can't increase that much since there isn't that strong relationship between ratings and comments.

Some words like drug names are independent from rating value. Making a model without knowing these kinds of words reduces the model’s accuracy.

Hidden layer size of my network is 50 because I couldn’t increase accuracy by increasing hidden layer size and increasing the layer size makes the program slower. Input size is the same as the count of different words in the comments. I also removed the meaningless stop words like “I, as, am, a, etc.” using a stop word list from an open source repository. Initial weights are distributed randomly. Output size is 10 because there are 10 possible ratings from 1 to 10. Learning rate of 0.01 seems to be good according to my tests. Loss function and activation functions are already given in the assignment pdf.

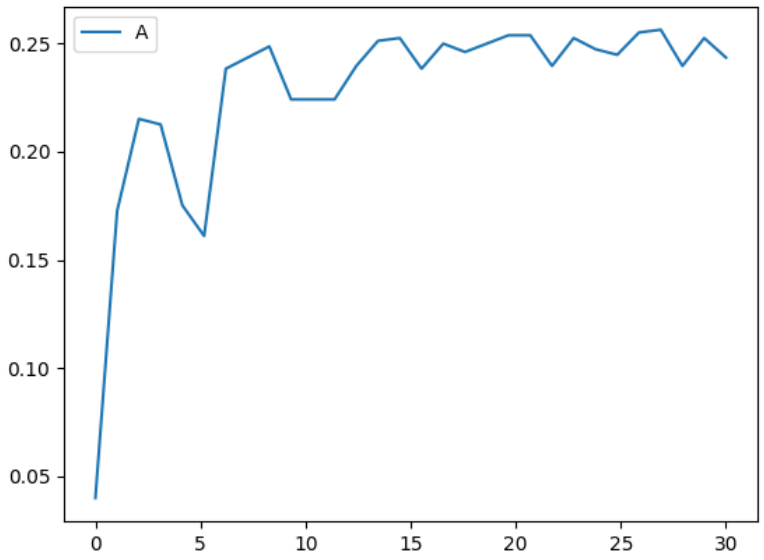

Figure 1: Accuracy through time

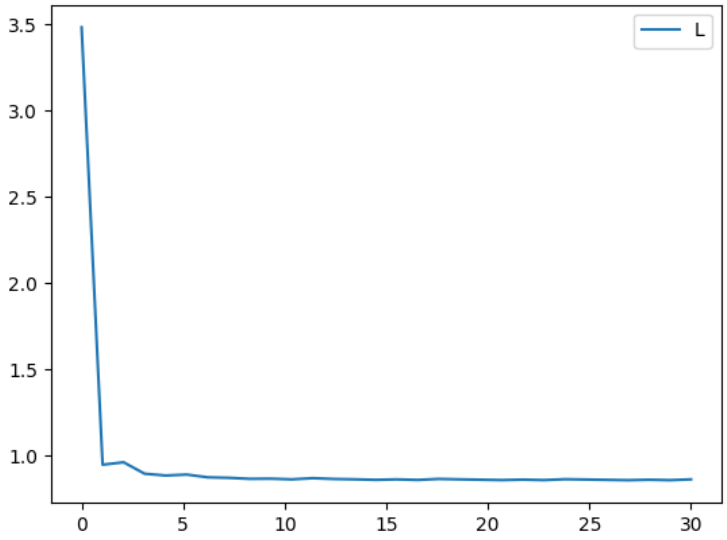

Figure 2: Loss through time