NLP – EX3

6 – a

LogLinear train & validation loss per epoch:

Chart

Description automatically generated

6 – b

LogLinear train & validation accuracy per epoch:

Chart, line chart

Description automatically generated

6 – c

Test loss & accuracy:

Accuracy over negated polarity:

Accuracy over rare words:

7 – a

W2V - LogLinear train & validation loss per epoch:

7 – b

W2V - LogLinear train & validation accuracy per epoch:

7 – c

W2V - LogLinear Test loss & accuracy:

Accuracy over negated polarity:

Accuracy over rare words:

8 – a

W2V - LSTM train & validation loss per epoch:

8 – b

W2V - LSTM train & validation accuracy per epoch:

8 – c

W2V - LSTM Test loss & accuracy:

Accuracy over negated polarity:

Accuracy over rare words:

9 - 1

Compare the results (test accuracy, validation accuracy) you've received for the

simple log-linear model, and the Word2Vec log-linear model. Which one performs

better? Provide a possible explanation for the results you have.

The Word2Vec log-linear performs better than the simple log linear model.

The difference between the two models is in how we embedd words. The W2V embedding gives us more information about words and their relations, it allows us to use the fact that two words are synonyms for example, thus giving us more information per train set. The simple log linear model on the other hand only has binary classification for whether a word exists or not, therefore losing out on information.