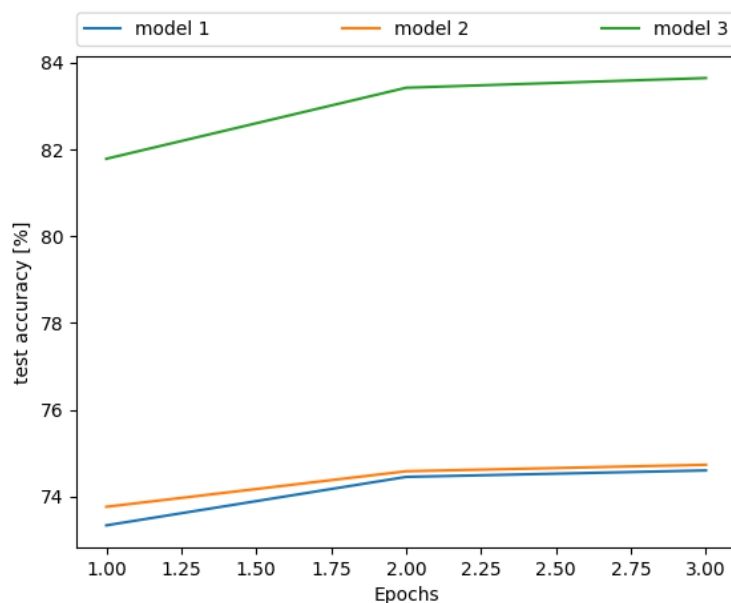


Advanced Topics in Machine Learning
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The conclusion from this assignment is that structured prediction with good features is better than structured prediction with only one feature or multi-class perceptron.

We also saw, that multi-class perceptron is equivalent to structured prediction with one feature.

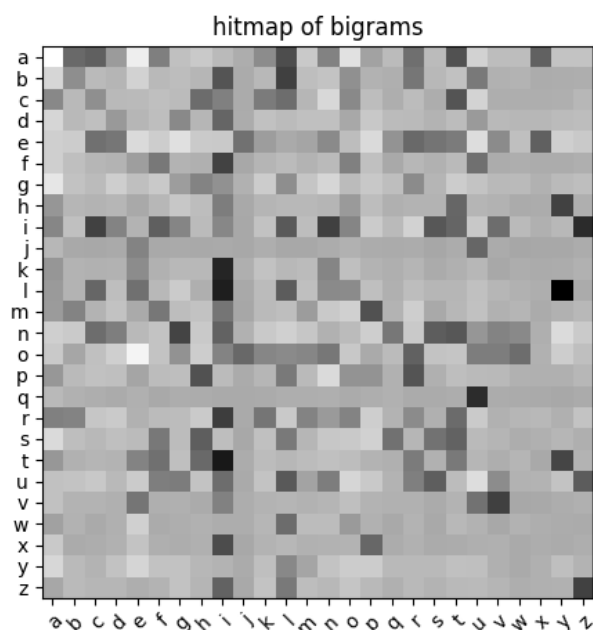
Here is the accuracy of the model (as order of the assignment):



with the bi-grams we get ~84%, and the other models is around 74%.

for the bonus:

here is the heatmap of the bi-grams:



* if you want to get the bi-gram and the model's accuracy, please run the python code: plotting.py
(I add all the necessary files compressed – with pickle to the submit, again -you only needed to run the code.)