exercise4:

In order to prove
$$A = \mu A L + (1-\mu) A_0$$
, $B = ...$

are oppropriate probability distribution,

we need to prove in A , $Zaij = 1$

We already have $Zaij = 1$, $Zaij = 1$

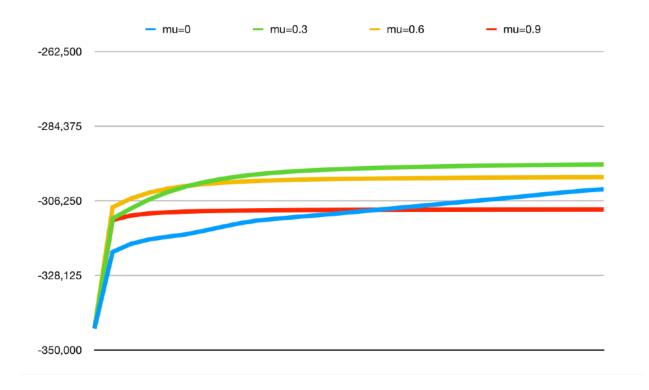
So $AZZAij = \mu Zaij + (1-\mu) Zaij = \mu + 1-\mu = 1$

Proved.

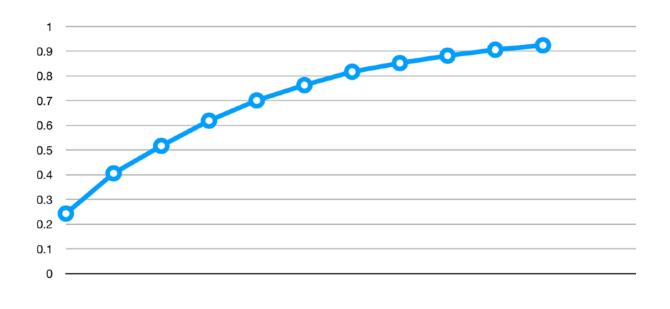
I have tested 11 mu values on test.txt, uploaded 11 log files and 11 prediction files.

I also have tested 3 mu values on concatenated.txt, uploaded 3 log files. Because prediction files on concatenated.txt are too big, so I cannot upload them.

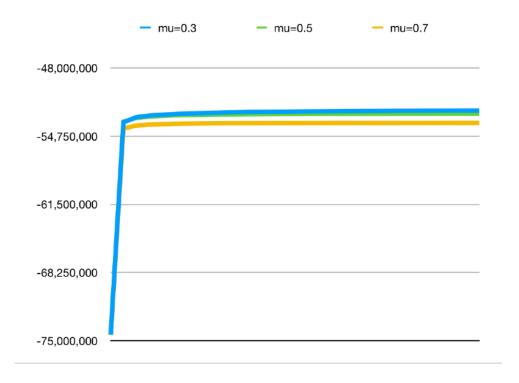
I chose four mu values and drew the relationship between iteration loops and log(O | lambda).



This is the relationship between mu values and POS-tagging accuracies. Notice that the accuracy increases with mu value.



This is the relationship between log($\mbox{O}\ |\ \mbox{lambda}$) and three mu values on big data.



If I drop off the first iteration value from the above figure, I got this:

