

The main trick that I used was for ranking.

Basically, if sentences is (a,b,c,d,?,e,f,g,...), and you have words to rank w_1, w_2, \dots, w_k , then, rank i th word according to frequency of bigram, that is, define score for each w_i as **$\text{count}(d, w_i) + \text{count}(e, w_i)$** where counts are coming from train set. Then sort in descending order. This gave me overall jump.

In my final model, I did ranking using this, and ties were broken by my embeddings based model, which was trained using gensim, and ranking was done using gensim's internal function `predict_output_word`. Without ranking defined above, mrr was ~ 0.3