REPORT - ASSIGNMENT 4

- Feature Description :
  word - Word
  is_first - True if word is the beginning of the sentence
  is_last - True if word is the end of the sentence
  prefix-1 - Word[0]
  prefix-2 - Word[:2]
  prefix-3 - Word[:3]
  suffix-1 - Word[-1]
  suffix-2 - Word[-2:]
  suffix-3 - Word[-3:]
  prev_word - previous word
  next_word - next word
  is_numeric - True if all characters of word are digits
  is_length_one - True if word has single character
  na_at_last - True if word has 'na' at end
  ya_at_last - True if word has 'ya' at end
  is_capitalized - True if word starts with a capital letter
  is_last_a - True if word has 'a' at end
  length - Length of the word

#		Train	Test
1.	10 most common transition features	(('VERB', 'AUX'), 4.284792) (('AUX', 'AUX'), 2.634958) (('NUM', 'NOUN'), 2.409708) (('PART', 'NUM'), 2.216555) (('PRON', 'ADP'), 2.20665) (('DET', 'NOUN'), 2.100979) (('NOUN', 'ADP'), 1.985218) (('PROPN', 'PROPN'), 1.856158) (('AUX', 'SCONJ'), 1.808891) (('ADJ', 'NOUN'), 1.791011)	(('VERB', 'AUX'), 3.351348) (('AUX', 'AUX'), 2.883161) (('NUM', 'NUM'), 2.029152) (('PROPN', 'ADP'), 1.968291) (('AUX', 'PUNCT'), 1.831876) (('NUM', 'NOUN'), 1.809205) (('PART', 'NUM'), 1.673777) (('PROPN', 'PROPN'),1.620077) (('PRON', 'ADP'), 1.611337) (('DET', 'NOUN'), 1.493193)
2.	10 least common transition features	(('ADJ', 'ADP'), -2.640411) (('ADJ', 'PRON'), -2.40467) (('PROPN', 'ADJ'), -2.018176) (('DET', 'ADP'), -1.847357) (('PROPN', 'AUX'), -1.814063) (('PROPN', 'DET'), -1.792265) (('VERB', 'ADJ'), -1.672327) (('AUX', 'ADJ'), -1.597697) (('NOUN', 'ADJ'), -1.476917) (('VERB', 'PROPN'), -1.33317)	(('PROPN', 'ADJ'), -1.980153) (('ADJ', 'ADP'), -1.736564) (('PROPN', 'AUX'), -1.682555) (('VERB', 'PROPN'), -1.49978) (('NOUN', 'NOUN'), -1.363538) (('ADJ', 'ADJ'), -1.36261) (('VERB', 'ADJ'), -1.296107) (('NOUN', 'DET'), -1.098471) (('AUX', 'VERB'), -1.067114) (('DET', 'PROPN'), -1.055852)

3.	Precision (per tag)	ADJ 1.0000 ADP 0.9978 ADV 0.9820 AUX 0.9825 CCONJ 0.9934 COMMA 1.0000 DET 0.9957 NOUN 0.9981 NUM 1.0000 PART 1.0000 PRON 0.9954 PROPN 1.0000 PUNCT 1.0000 SCONJ 0.9839 VERB 1.0000	ADJ 0.6602 ADP 0.9677 ADV 0.6667 AUX 0.9779 CCONJ 1.0000 DET 0.8250 NOUN 0.7978 NUM 0.9200 PART 0.9706 PRON 0.9016 PROPN 0.6726 PUNCT 1.0000 SCONJ 0.7500 VERB 0.8958
4.	Recall (per tag)	ADJ 1.0000 ADP 0.9986 ADV 0.9820 AUX 1.0000 CCONJ 1.0000 COMMA 1.0000 DET 0.9913 NOUN 0.9994 NUM 1.0000 PART 1.0000 PRON 0.9954 PROPN 0.9958 PUNCT 1.0000 SCONJ 1.0000 VERB 0.9781	ADJ 0.7234 ADP 0.9709 ADV 0.4762 AUX 0.9568 CCONJ 1.0000 DET 0.9167 NOUN 0.8754 NUM 0.9200 PART 1.0000 PRON 0.8462 PROPN 0.5241 PUNCT 1.0000 SCONJ 1.0000 VERB 0.8687
5.	F-Score (per tag)	ADJ 1.0000 ADP 0.9982 ADV 0.9820 AUX 0.9912 CCONJ 0.9967 COMMA 1.0000 DET 0.9935 NOUN 0.9987 NUM 1.0000 PART 1.0000 PRON 0.9954 PROPN 0.9979 PUNCT 1.0000 SCONJ 0.9919 VERB 0.9889	ADJ 0.6904 ADP 0.9693 ADV 0.5556 AUX 0.9673 CCONJ 1.0000 DET 0.8684 NOUN 0.8348 NUM 0.9200 PART 0.9851 PRON 0.8730 PROPN 0.5891 PUNCT 1.0000 SCONJ 0.8571 VERB 0.8821
6.	Overall Accuracy	0.9965838917356458	0.869684499314129