

**ECE 448 FALL 2020**

**Assignment 4:**

**HMM POS Tagging**

**Dec. 3, 2020**

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Running Baseline...

Accuracy: 93.94%

Top K Wrong Word-Tag Predictions: [('to', {'TO': 2260}), ('that', {'CONJ': 748}), ('as', {'CONJ': 231}), ('more', {'ADV': 190})]

Top K Correct Word-Tag Predictions: [('the', {'DET': 13917}), (',', {'PERIOD': 11453}), ('.', {'PERIOD': 10100}), ('of', {'IN': 7056})]

Multitags Accuracy: 90.32%

Unseen words Accuracy: 69.70%

Running Viterbi\_p1...

Accuracy: 92.61%

Top K Wrong Word-Tag Predictions: [('to', {'IN': 2753, 'TO': 1}), ('that', {'DET': 247, 'PRON': 87, 'CONJ': 325}), ('will', {'NOUN': 310}), ('out', {'IN': 269})]

Top K Correct Word-Tag Predictions: [('the', {'DET': 13917}), (',', {'PERIOD': 11453}), ('.', {'PERIOD': 10100}), ('of', {'IN': 7056})]

Multitags Accuracy: 88.76%

Unseen words Accuracy: 55.65%

Running Viterbi\_p2...

Accuracy: 92.71%

Top K Wrong Word-Tag Predictions: [('to', {'IN': 2754, 'TO': 1}), ('that', {'DET': 245, 'PRON': 87, 'CONJ': 325}), ('will', {'NOUN': 310}), ('out', {'IN': 269})]

Top K Correct Word-Tag Predictions: [('the', {'DET': 13917}), (',', {'PERIOD': 11453}), ('.', {'PERIOD': 10100}), ('of', {'IN': 7056})]

Multitags Accuracy: 88.76%

Unseen words Accuracy: 57.92%

Running extra...

Accuracy: 92.71%

Top K Wrong Word-Tag Predictions: [('to', {'IN': 2754, 'TO': 1}), ('that', {'DET': 245, 'PRON': 87, 'CONJ': 325}), ('will', {'NOUN': 310}), ('out', {'IN': 269})]

Top K Correct Word-Tag Predictions: [('the', {'DET': 13917}), (',', {'PERIOD': 11453}), ('.', {'PERIOD': 10100}), ('of', {'IN': 7056})]

Multitags Accuracy: 88.76%

Unseen words Accuracy: 57.92%