Report for HW4

CS 519 Natural Language Processing

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Part 1

For this example we know T | T appears once and T O | T appears twice.

So the MLEs are : P(T | T) = 1/3, P(T O | T) = 2/3

Part 2

For words “boat” the pronounce is ‘B OW T’

So the JPron can be

‘B, O, T’ P = 1 \* 0.2 \* 0.3 = 0.06

‘B, O, T O’ P = 1\* 0.2 \* 0.5 = 0.1

‘B, O, O T O’ P = 1 \* 0.2 \*0.1 = 0.02

‘B, O, O’ P = 1 \* 0.2 \*0.1 = 0.02

‘B, O O, T’ P = 1 \* 0.8 \*0.3 = 0.24

‘B, O O, T O’ P =1 \*0.8 \*0.5 = 0.4

‘B, O O, O’ P = 1 \* 0.8\* 0.1 = 0.08

‘B, O O, O T O’ P = 1 \* 0.8 \* 0.1 = 0.08

So we know the ‘B->B, OW-> O O, T-> T O’ is the Viterbi aligment.

Part 3