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IAT-1 NLP

Q3] B]

Formalizing HMM Taggers

Possible Bigrams.

<s> DT	<s> DT NN VB2 JJ </s>
DT NN	<s> DT NN VB2 JJ</s>
NN VB2	<s> DT NN VB2 JJ </s>.
VB2 JJ	
JJ </s>	

Transition probabilities.

$P(DT \mid <s>) = 3/3 = 1$

$P(NN \mid DT) = 3/3 = 1$

$P(VB2 / NN) = 3/3 = 1$

$P(JJ / VB2) = 3/3 = 1$

$P(</s> \mid JJ) = 3/3 = 1$

Emmission probabilities.

	DT	NN	VBZ	JJ
the	3/3	0	0	0
cat	0	2/2	0	0
is	0	0	3/3	0
brown	0	0	0	1/1
black	0	0	0	1/1
dog	0	1/1	0	0
white	0	0	0	1/1

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Transition Probabilities.

	<s>	DT	NN	VBZ	JJ	</s>
<s>	0	1	0	0	0	0
DT	0	0	1	0	0	0
NN	0	0	0	1	0	0
VBZ	0	0	0	0	1	0
JJ	0	0	0	0	0	1
</s>	0	0	0	0	0	0