Q1:

Pi:

[0.5, 0.5]

A:

[0.5, 0.5]

[0.5, 0.5]

B:

[0.9, 0.1]

[0.5, 0.5]

Q2

Estimate of states of next time step

Q3

Estimate of observations of next time step

Q4

The passed observations are independent of the current state.

Q5

Delta: T x N

Delta\_index: (T – 1) x N

Q6

Definition of conditional probability

The sum of Alpha\_T(i) in the final time step is the probability of observation sequence

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描述已自动生成

Q7

Define convergence: 1. The difference between re-estimate and previous parameters is less than a certain value

2. the difference between the re-estimate and previous probability of observation sequence is less than a certain value

It depends on the definition of convergence

It do not converge from the aspect of difference of estimate parameter and true parameter.

Q8

The difference of One of the elements is much greater than the other.

computing variance to control variance

Q9

Q10

1. uniform values will result in a local maximum from which the model cannot climb. degenerate
2. diagonal and [0 0 1]: all the elements of para matrices become NAN. Degenerate to 1 hidden state
3. converge faster and learning outcome better

[[0.696, 0.062, 0.243],

[0.115, 0.771, 0.114],

[0.171, 0.287, 0.542]]

[[0.709, 0.186, 0.105, 0.0],

[0.105, 0.407, 0.301, 0.186],

[0.0, 0.152, 0.183, 0.666]]