Unit 10 Discussion Example - Modeling Real-World Probability Over Time

Post 1 Initial Response

1) My business is web design and management for small businesses. My company creates websites for clients and then maintains their sites for the lifetime of their business. We are constantly competing against other companies and self-creating/managing applications that maintain website for small businesses. So, I will create a Markov system to model the interrelationship between whether our clients for whom we have created a website for continue to use our maintenance services or seek other ways to maintain (or simply not maintain) their websites.

   State A = clients use our services to maintain their website

   State B = clients use a different service to maintain their website

2) Once our clients use our maintenance services on their websites, they are 75% likely to continue using our services.

   Probability of going State A to State A = 75% = 0.75

   Therefore, the probability of switching to a different service to manage their site is 25%.

   Probability of going State A to State B = 25% = 0.25

   If our clients happen to use a different service to maintain their Website, they are 50% likely they come back to our services.

   Probability of going State B to State A =50% = 0.50

   Therefore, the probability of staying with the same service to manage their site is also 50%. Probability

   of going State B to State B = 50% = 0.50
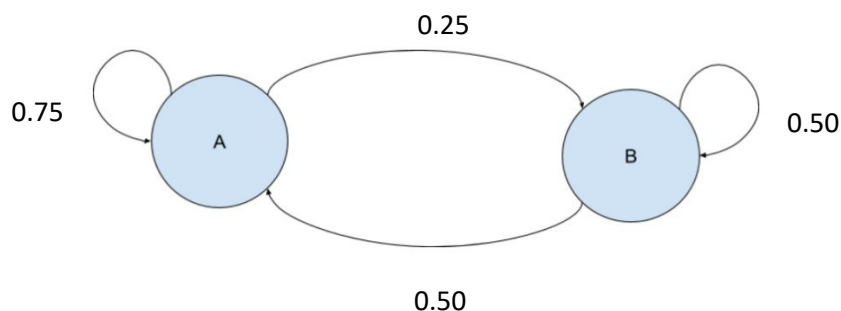
3) I have reviewed my current business situation and determined that of the new clients that we have created websites for over the past 5 years, 80% of them, my company is currently still maintaining their sites.   The initial distribution vector is v =

0.8
0.2

   (Note: I am using tables to represent matrix notation. You may also do the same.)