Markov Chain and Power Iteration

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markov_chain _power _iteration.m is designed for finding equilibrium point of Markov Chain. In other words, it finds $\lim_{k\to\infty} q^{(k)}$ where

$$q^{(k+1)} = Pq^{(k)}$$

$$P = \begin{bmatrix} 0.63 & 0.12 & 0.14 & 0.09 \\ 0.10 & 0.65 & 0.28 & 0.15 \\ 0.16 & 0.07 & 0.34 & 0.20 \\ 0.11 & 0.16 & 0.24 & 0.56 \end{bmatrix}$$

It uses power iteration to find equilibrium point of Markov Chain. It starts with initial vector $(\frac{1}{4}, \frac{1}{4}, \frac{1}{4}, \frac{1}{4})$. However, the initial vector is not important for equilibrium point.