STAT 380 Lecture 8
Spring 2019
21 January 2019

- On Wednesday Boyi will lecture; that material will be on exams.
- Assignment 2 is due Wednesday in the drop box by 3 PM. Assignment 3 has been posted and is due 30 Jan by 3PM in the drop box. It is short.
- I am working on the slides on Markov Chains. I have covered slides 1 through 17.
- I defined an *initial distribution* α. It is a *probability vector* (non-negative entries summing to 1) which I write as a row vector.
- The definition is that $\alpha_i = P(X_0 = i)$.
- The unconditional probability $P(X_n = j)$ is

$$P(X_n = j) = (\alpha \mathbf{P}^n)_j.$$

- I showed that if $\mathbf{P}^n$ has a limit, say $\mathbf{P}^\infty$ then each row α of $\mathbf{P}^\infty$ solves $\alpha = \alpha \mathbf{P}$.
- Handwritten slides are here.