STAT 270 Lecture 24
Fall 2015
4 November 2015

- Remember midterm on Friday. Joint pmfs not on midterm.
- Memoryless property of exponential distribution and joint pmfs. I just started joint densities.
- We are finished up to slide 68 of "Continuous Distributions".
- Suggested problems: 5.22, 5.24, 5.30, 5.47 (a), 5.49.
- We have covered up to page 98 in the text
- Handwritten slides.
- Key jargon, ideas:
  - If X has an Exponential(λ) distribution then
$$P(X > t + s | X > s) = P(X > t) = e^{-\lambda t}.$$
  - If X and Y are discrete then the joint pmf is
$$p(x, y) = P(X = x, Y = y).$$
  - We have $\sum_x \sum_y p(x, y) = 1$.
  - The pmf of X comes from the joint pmf by adding over y:
$$p_X(x) = P(X = x) = \sum_y p(x, y).$$
  - We call $p_X(x)$ the *marginal* pmf.
  - There is an analogous idea for continuous X and Y called the joint density.