

## Lecture #23: Classical Probability Distributions

### Questions for Review

1. Briefly describe situations where each of the following classical **probability distributions** might be useful when you are trying to solve a problem.
  - (a) The **Geometric Distribution**
  - (b) The **Binomial Distribution**
  - (c) The **Negative Binomial Distribution**
  - (d) The **Hypergeometric Distribution**
2. What is **continuous probability theory**? How is it similar to, and how is it different from, the “discrete probability theory” that was studied in CPSC 251 and in this course?
3. Describe **exponential distributions** and **Gaussian distributions** — which are also called **normal distributions**. How are these related to (some of) the “discrete” probability distributions that have now been introduced?
4. Why might it be helpful for a computer science student to know about these probability distributions, even though there is not room to discuss them in CPSC 251 and 351?