Lecture #18: Probability Distributions
Questions for Review

1. What is an ***experiment***? What are the ***outcomes*** associated with an experiment, and what is its ***sample space***?

2. What does it mean for a set to be ***countable***? What (concerning "countability") is being studied when ***discrete probability theory*** is being studied?

3. What is an ***event***?

4. What is a ***probability distribution***? How can this be extended, so that it can be applied to ***events***?

5. What is the ***uniform probability distribution*** for an experiment with a finite sample space, Ω? What is the probability of an event $\alpha \subseteq \Omega$, using this probability distribution?

6. What is the ***complement***, $\overline{A}$, of an event A? How are the probabilities of A and $\overline{A}$ related?

7. Suppose A and B are both events. How are the probabilities of the events A, B, $A \cap B$ and $A \cap B$ related? How can this be used to find a simple *upper bound* on $\mathsf{P}(A \cup B)$, for a probability distribution P and a pair of events A and B?

8. What is the ***union bound***?