

CHAPTER OVERVIEW

2: Probability Spaces

The basic topics in this chapter are fundamental to probability theory, and should be accessible to new students of probability. We start with the paradigm of the random experiment and its mathematical model, the probability space. The main objects in this model are sample spaces, events, random variables, and probability measures. We also study several concepts of fundamental importance: conditional probability and independence.

The advanced topics can be skipped if you are a new student of probability, or can be studied later, as the need arises. These topics include the convergence of random variables, the measure-theoretic foundations of probability theory, and the existence and construction of probability measures and random processes.

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