Lecture 2 — Random Variables

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- A random variable is a function that maps the outcomes of a random experiment into a set of real numbers
- The Probability Mass Function (PMF)
  - The PMF is a probability measure that gives us probabilities of the possible values for a random variable
  - The PMF may be defined as:

$$P_x(x) = \begin{cases} P(X = x), & \text{if } x \in S_x \\ 0, & \text{Otherwise} \end{cases}$$

  - The probability mass function can be obtained using the probabilities of the corresponding sample space outcomes