

Probability Learning

Probability learning is a research paradigm used in the study of learning. In these studies subjects are asked to guess which of a limited choice of stimuli or events will occur next. With experience their predictions will approximate the actual probability of the possible outcomes.

Four perspectives on probability are commonly used: Classical, Empirical, Subjective, and Axiomatic. A probability is a number that reflects the chance or likelihood that a particular event will occur. A probability of 0 indicates that there

is no chance that a particular event will occur, whereas a probability of 1 indicates that an event is certain to occur. For example, most people would say that a 20% chance of rain in the next hour is moderately low probability, but if there were a 20% chance of a devastating earthquake in the next hour, that would be alarming high. If you are listening to weather, high probability means something close to zero percent.

Three types of Probability

1. Theoretical probability: For theoretical reasons, we assume that all n possible outcomes of a particular experiment are equally likely, and we assign a probability of $\frac{1}{n}$ to each possible outcome. For example, the theoretical probability of rolling a 3 on a regular 6-sided

die is 116. There is a 20% chance of rain tomorrow. When flipping a coin, there is a 50% probability it will be heads.

On a spinner that has four colours occupying equally sized spaces, there is a one in four probability it will land on any one colour.