

# CDF

## Cumulative Distribution Function

CDF tells us the probability a random variable returns a value less than some specified value. It is the accumulation of the probability of values up to some value.

$$f(x) = P_r \left[ \underset{\substack{\uparrow \\ \text{Random variable}}}{X} \leq \underset{\substack{\downarrow \\ \text{Some value } \in X}}{y} \right]$$

