

Introduction to Bayesian Modeling: Coin Game

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Coin Game

The probability of y heads from N tosses where each toss lands heads with probability r is given by:

$$P(Y = y) = \binom{N}{y} r^y (1 - r)^{N-y}$$

Expectation:

$$\mathbb{E}_{P(x)} \{f(X)\} = \sum_x f(x) P(x)$$

the summation is over all possible values that the random variable can take.