Prerequisites: Please refresh your math and stats skills!

- Specifically I assume the following Prerequisites
  - Probability rules (basic)
    - You need to know how to calculate basic probabilities (e.g., if I have 5 red and 3 blue balls in a bucket, what is the probability of picking a red ball?)
    - Are able to apply the conditional rule of probability (i.e., $P(A, B) = P(A \mid B) P(B)$).
  - Statistics notions (basic)
    - You need to know the following statistics: Mean (average), (empirical) Variance, (empirical) Standard Deviation.
    - Given a list of data, you must know how to calculate the above statistics on it.
  - Probability distributions (basic)
    - You need to understand probability distributions on a conceptional level. E.g. you should know that probabilities sum up (or integrate) to 1. You need to be able to locate the mean and estimate the probability for certain outcomes given the graph of a distribution.
    - A detailed knowledge of specific distributions is not needed.
  - Calculus (intermediate)
    - You need know how to calculate derivatives, including applying the sum, product, as well as the chain rule.
    - You must be well versed in the following mathematical functions: logarithm, exponential, power functions.
    - You must be familiar with the summation and product sign
  - Matrix Algebra (intermediate)
    - You must know how to multiply matrices and vectors.