

1. (30 points) Generate a random data set with the equation  $y = 5 + 3.x$  and implement the linear regression for this data set in Python.
  2. (35 points) Implement the k-nearest neighbor (kNN) algorithm to the Iris data set in Python and set  $k = 4$ .
  3. (35 points) Apply Gaussian Naïve Bayes classifier for the Iris data set in Python. Use 70% of the data set for training and 30% for testing. Also, find the number of mislabeled points.
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