

# Naive Bayes and Logistic Regression: Reading List

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## 1 Preliminary Knowledge

**Naive Bayes Explanation** [http://www.saedsayad.com/naive\\_bayesian.htm](http://www.saedsayad.com/naive_bayesian.htm)

**NB Classifier with Gaussian Distribution** [https://en.wikipedia.org/wiki/Naive\\_Bayes\\_classifier](https://en.wikipedia.org/wiki/Naive_Bayes_classifier)

**Stochastic Gradient Descent** [https://en.wikipedia.org/wiki/Stochastic\\_gradient\\_descent](https://en.wikipedia.org/wiki/Stochastic_gradient_descent)

**Logistic Regression** [https://en.wikipedia.org/wiki/Logistic\\_regression](https://en.wikipedia.org/wiki/Logistic_regression)

## 2 Slides and PDFs

There are 4 PDFS/slides in here. Apart from CS229 note, go through all of them extensively. For CS229 pdf, read pages 1-7(before Normal equation) and pages 16-19 (before digression).

**It is not needed that you need to go through all these links and PDFs to understand naive Bayes and logistic regression. They can be used as alternatives- in case you cannot understand from one resource, take help from another one.**

## 3 Code

Source: <https://repl.it/@ImtiazNaved/LovableImaginativeAmoeba>.

Run **main.py** for loading the dataset, running logistic regression and naive bayes, plotting the solutions.

There are two datasets, both with two features- “dummy\_data.csv”, “dummy\_data\_2.csv”. You can make a choice on which one to load from the code.

The **logistic\_regression.py** contains the code of stochastic gradient descent. In each iteration, the position of the data points and the decision

boundary up to that iteration is drawn on “logregview.pdf”. The final output is plotted in “logreg.pdf”.

The **naive\_bayes.py** contains the code of Gaussian Naive Bayes. The final output is plotted in “nbayes.pdf”.