1. **What is the task?**

*Task:* Classify Amazon Book Reviews according to rating.

1. **What ML solution did you choose and, most importantly, why was this an appropriate choice?**

I tried two Naïve Bayes classifiers with their variant

*Steps -* Load data > Preprocess the data > Split train/dev/test > vectorize the feature and the target variables using TF-IDF vectorizer converting category to numbers > use test data in the inference process.

1. **How did you choose to evaluate success?**

I used the F1 score, accuracy score, Confusion matrix, and classification report to evaluate the models.

1. **What software did you use and why did you choose it?**

Language: Python as all the libraries.

Software: *scikit-learn* has all the machine learning algorithms prewritten, *NumPy, pandas, matplotlib,*

*NLTK* and others that are written in python.

1. **what are the results?**

Predicting test data using Multinomial Naive Bayes

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Predicting test data using GaussianNaive Bayes

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Predicting test data using BernoulliNaive Bayes

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Predicting test data using ComplementNaive Bayes

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Predicting test data using Logistic Regression

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**The Support vector machine achieves a better result on the data. Hence it could be used in the production server.**