Chikitsak Samuha's
S.S. & L.S.Patkar College of Arts & Science and V.P.VardeCollege of Commerce & Economics.
S.V.Road, Goregaon (W), Mumbai – 400 062

PROJECT SYNOPSIS

Project Title: NLP in Recommendation Engine

Name of Student/s: Vishal Kashyap and Akshay Oza

Roll No/s: 25 and 40

1. Abstract (Times new Roman Size 14):

Most of the recommendation engine uses content based (Item – Item), collaborative filtering (User – User) or Hybrid approach (both). And in all these approaches, rating is used as a feedback variable. As we know some of the customer give their feedback as a rating and some as a comments. In current approach most of the companies are only using rating as a feedback variable because it is in numeric format, because all the algorithm runs on numeric data. But in our research paper, we will be using comments also as a feedback variable. To use comments we need to convert it into numeric format between the scale of 0 – 5 (similar to rating) and use it in our algorithm. This will solve **Data Sparsity** to some extend and will improves the accuracy of algorithm. The more the data the better will be the prediction accuracy of recommendation engine.

2. Problem statement (Times new Roman Size 14):

Solving the problem of **Data Sparsity** in current recommendation engine techniques using NLP techniques for more accuracy.

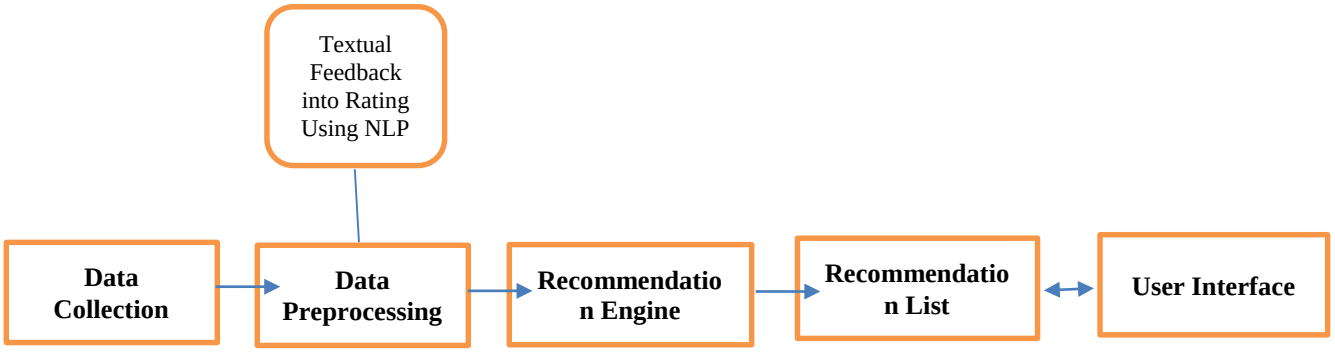
3. Domain: AI: ML and NLP

4. Tools/Platform: Python, AWS/Heroku, Scikit-Learn, Flask

5. Literature Survey (Times new Roman Size 14):

Cons	Pros
Data Sparsity is major drawback which give less accurate results.	Simple to understand and implement the algorithm, if rating of most of the customer is available as a feedback for their product.
Cold start problem.	No feature selection needed in collaborative filtering method, which is widely used in recommendation engine.
	Minimum domain knowledge required

6. Methodology/Planning of work (Times new Roman Size 14):



7. Facilities required for proposed work (Times new Roman Size 14):

- Software requirement : Python 3.6, Python IDE, Windows 7 or above
- Hardware requirement : 1TB HDD, 2.60GHz, Intel i3 7th Gen.