

INTERNAL HACKATHON @ IET DAVV INDORE

PS AND TEAM DETAILS

Ministry/ Organization name: Indian Space Research

Organisation(ISRO)

Problem Statement Number/ID: NM396

Domain Bucket: **Software-Miscellaneous**

Team Name : **Endeavours (12)**

Team Leader Name : **Riti Nema**

PROBLEM STATEMENT DESCRIPTION

Webportals like *Bhuvan* get vast amount of feedback from the users. To go through all the feedbacks can be a tedious job. Develop software to categorize opinions expressed in feedback forums. This can be utilized *for feedback management system*.

The software must provide the following output.

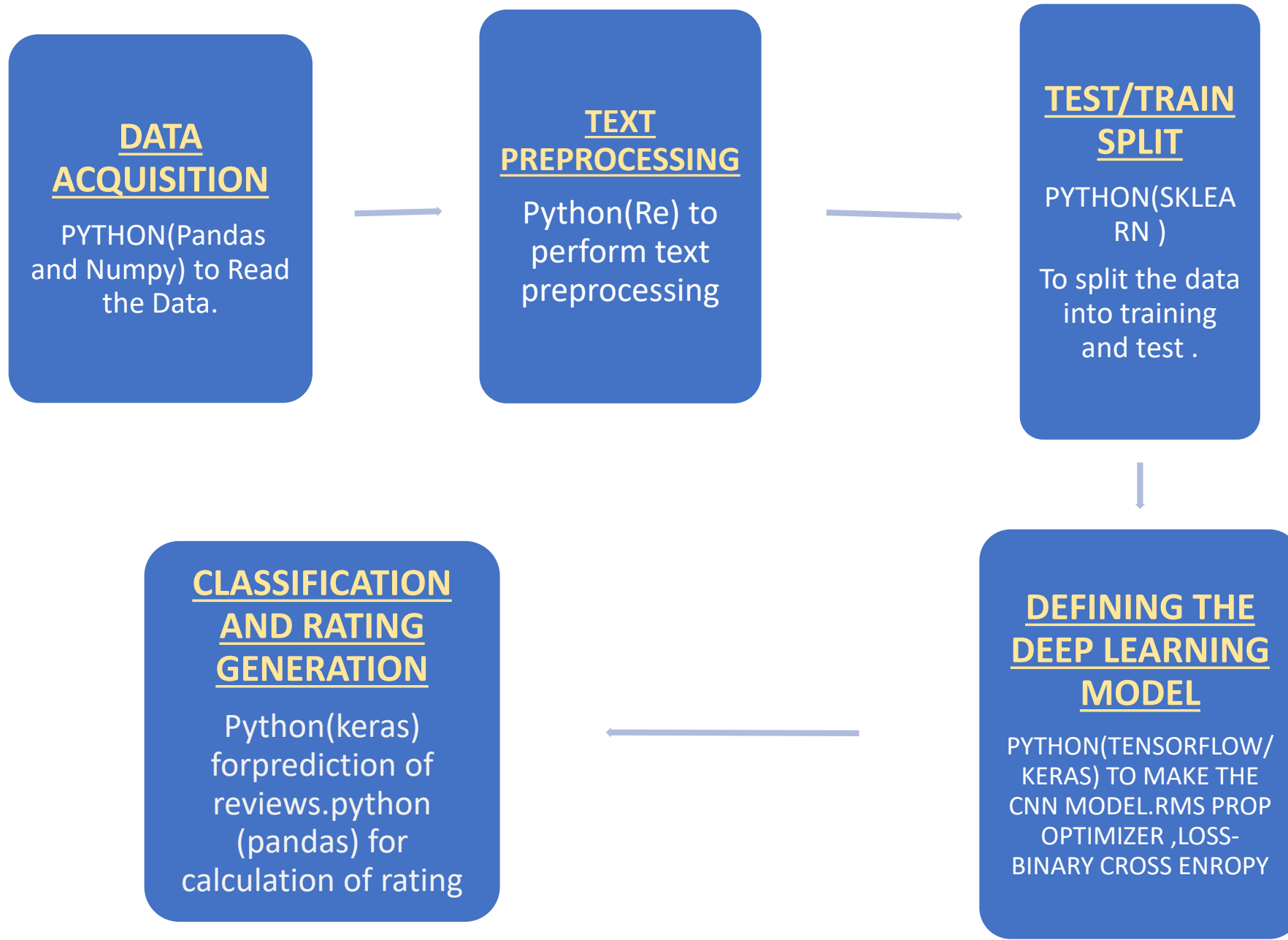
- 1) Classification of individual comments/reviews.*
- 2) Determining overall rating based on individual comments/reviews.*

The Multi-Domain Sentiment Dataset contains product reviews taken from Amazon.com from many product types (domains).
<http://jmcauley.ucsd.edu/data/amazon/>

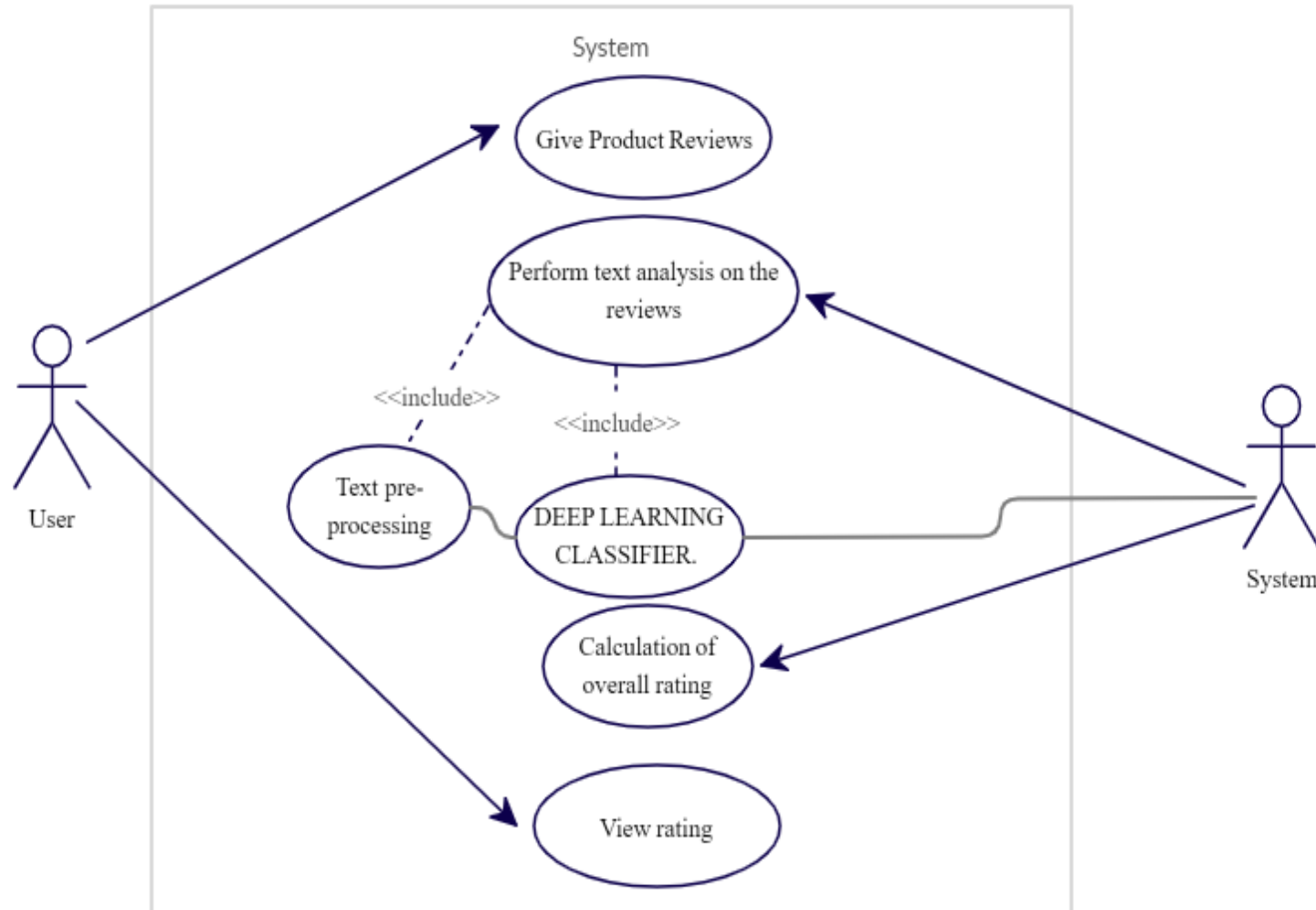
IDEA / APPROACH DETAILS

- *Creating a Software to categorize opinions* expressed in feedback forums (Sentiment Analysis -Text Feedback)
- *Extracting the database* containing the reviews submitted by the consumer, then preprocessing the data and extracting the features from data.
- *Developing the Supervised Deep Learning Model* comprising of CNN and using Natural Language Processing to classify the reviews. The model will train on The Data provided ,we will label the data as Positive if the rating is 4/5 and Negative if the rating is 1/2. the data having rating 3 is neglected as it is neutral.the 80% of the Data is used for Training and rest for testing the Model.
- *The Model will then classify* the reviews into Positive and Negative Reviews based on pretrained Weights of the Amazon Data .
- Once The Reviews are classified ,then we *will generate the Average Rating of the service based on Individual Reviews.*

TECHNOLOGY SELECTION



PRELIMINARY ANALYSIS AND DESIGN



OTHER USES:

- *Competitive research:* Competitive analysis that involves sentiment analysis can help understand product weaknesses and strengths. It can also help in improving services.
- *Product Analysis:* It allows for learning about product advantages and drawbacks.

PRELIMINARY ANALYSIS AND DESIGN

- **DEPENDENCIES:**
- Amazon dataset
: <http://jmcauley.ucsd.edu/data/amazon/>
- GPU(Graphic processing unit) : IT will make our model to train in less time