**ASPECT BASED SENTIMENT ANALYSIS ON RESTAURANT REVIEWS**

**DATASET:** SamEval 2016 restaurant data (reviews, aspect categories and sentiment) – Can be changed.

\* The steps written below are not concrete and can be changed during implementation.

**FOLLOWING ARE THE STAGES INVOLVED:**

1. **BASIC PREPROCESSING:**

* Elimination of non-English Reviews.
* Splitting of review Paragraphs into sentences.
* Removal of punctuations, converting words to lowercase.
* Faulty review removal (Still not sure about it).

1. **ADVANCE PREPROCESSING:**

* Stopwords Removal.
* Correction of words.
* Stemming, Lemmatization

1. **ASPECT TERM EXTRACTION:**

* Noun chunk dependency parser (Spacy)
* Aspect Category Classifier (Finds Aspect Category given the Aspect Terms)
* Model maybe built using CNN but still not sure.
* Word Embedding

1. **SENTIMENT EXTRACTION:**

* PoS tagging (spaCy) for pointing out adjectives and adverbs.
* Model will be similar to Aspect model, (most probably will be built using CNN – Keras Library)

1. **ABSA (COMBINING BOTH MODELS):**
2. **FINAL OUTPUT:**

* Maybe using Bar Graphs or other visualization techniques.

The final result will most probably be a website where the user can give reviews on the product either in written or verbal form and the output will be shown in the form of a bar graph of different aspects with positive or negative rating according to the feedback.