



# Aspect Based Sentiment Analysis on Consumer Reviews

Under the guidance of:  
**Dr. C Venugopal Chari.**

By:  
P Jitendra Kalyan - 160114733096  
R Pranith Kumar - 160114733106

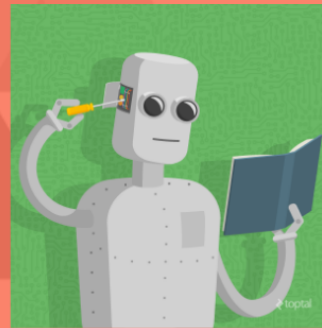


## ***AGENDA***

- Machine Learning
- Natural Language Processing
- Rise of e-Commerce
- ABSA
- Task Description

# ***Machine Learning***

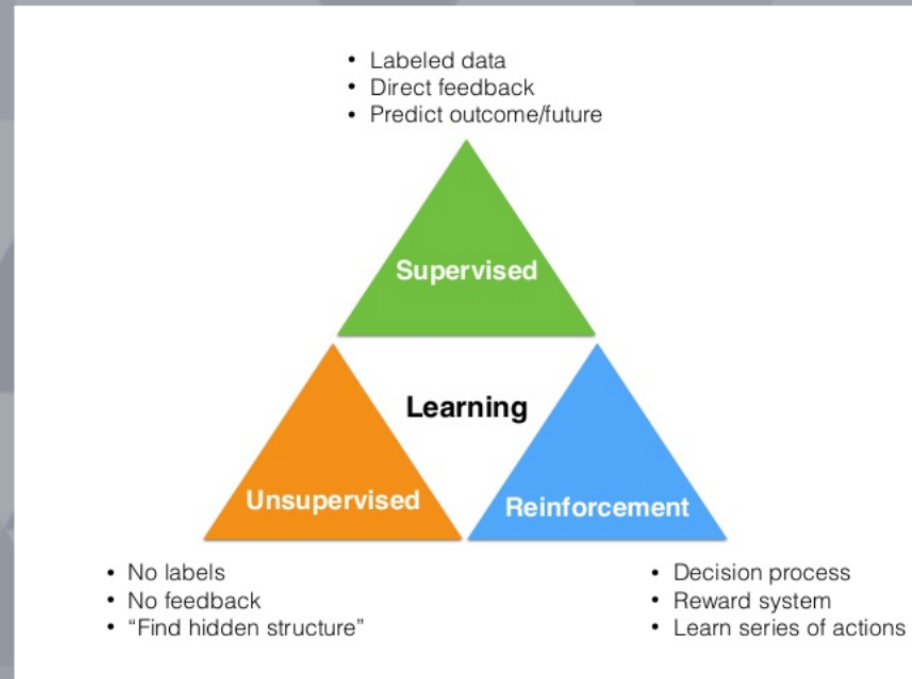
*"Machine learning is the subfield of computer science that, gives computers the ability to learn without being explicitly programmed."  
- Arthur Samuel*



***Classification  
of  
Techniques***

# *Classification of Techniques*

- Supervised Learning
- Unsupervised Learning
- Reinforced Learning





# ***Natural Language Processing***

- *Studies the generation and understanding of language, both in writing and speaking.*
- *Its main objective is to create machines that are able to understand and communicate with humans in a natural way.*

***NLP  
Techniques***

***Rise of e-commerce***

# *NLP Techniques*

- Text categorization
- Speech analysis
- Text Summerization
- Sentiment Analysis



## ***Rise of e-commerce***

- Substantial rise in online shopping sites
- Increase in user generated content, ex-reviews, ratings



# ***Sentiment Analysis***

*"Sentiment analysis is critical because helps you see what customers like and dislike about you and your brand"*

*"It is a way to evaluate written or spoken language to determine if the expression is favorable, unfavorable, or neutral, and to what degree"*



Natural Language Processing



Knowledge Representation



Automated Reasoning



Machine Learning

***How is it done ?***

***Approaches***



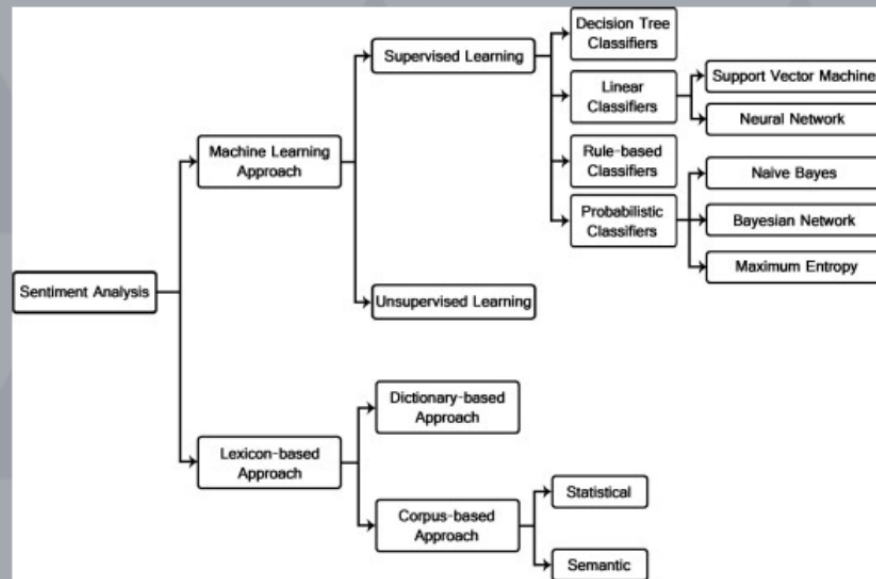
# *How is it done ?*

Some popular techniques

- Naive Bayes Theorem
- Negation dealing with bigrams
- n-grams
- Word Cluster



# Approaches





## **ABSA** *Aspect Based Sentiment Analysis*

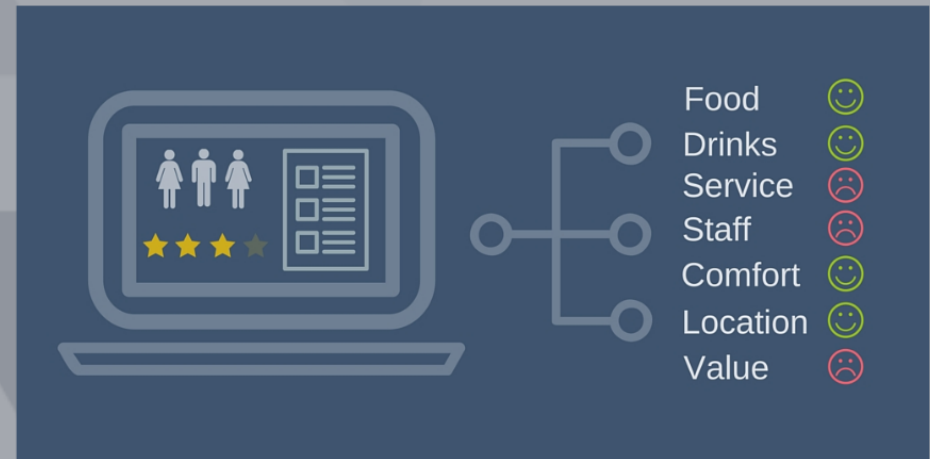
*"It refers to determining the opinions or sentiments expressed on different features or aspects of entities, e.g., of a cell phone, a digital camera, or a bank."*

***A simple  
Visualization***

***Task  
Description***

# *A simple Visualization*

- Entity
- Attribute
- Entity - Attribute pairs



## ***Task Description***

- Review collection
- Aspect Categorization
- Opinion Target Expression
- Sentiment Polarity



# REFERENCES

- SemEval paper 2015 (base paper)
- [AnalyticsVidhya.com](http://AnalyticsVidhya.com)