NATURAL LANGUAGE PROCESSING

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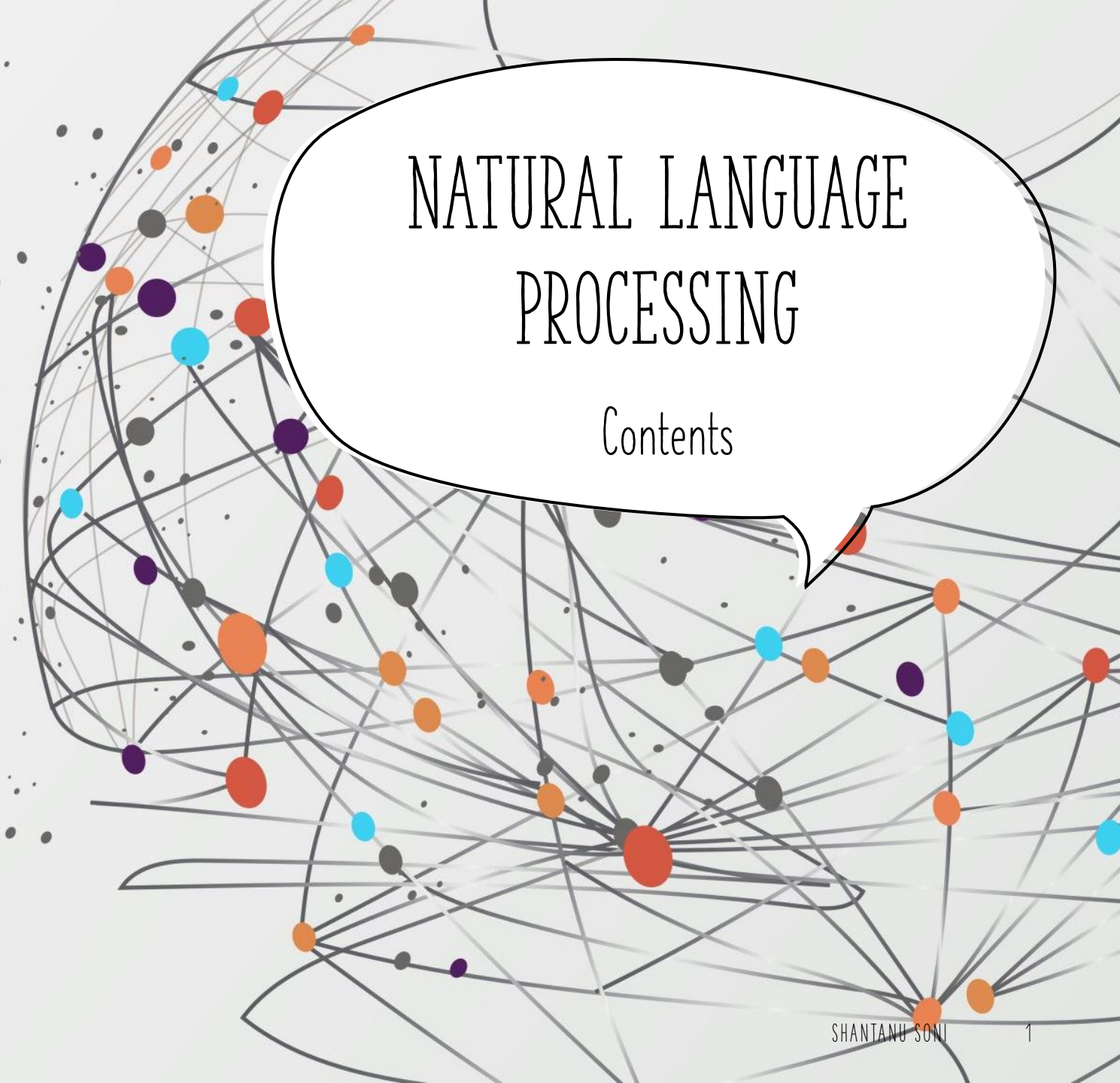

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- ✓ Natural language processing (NLP) is a field of artificial intelligence in which computers analyze, understand, and derive meaning from human language in a smart and useful way
  It helps computers to perform meaningful jobs from text, audio and words, like understanding the sentiment, translating a text to a different language or suggesting auto-correct, and all this is just scratching the surface of what powerful computations can be done

INTRODUCTION

- AutoCorrect and auto complete
- Language Translator
- Social Media monitoring
- Chatbots
- Survey Analysis
- Targeted Advertising
- Hiring and recruitment
- Voice Assistant
- Grammar checkers
- Email Filtering
- And much more…

Application

- Here, lets suppose we are given a twitter data with each tweet representing either a positive or a negative sentiment regarding a movie
- Imagine a model that could take in the dataset i.e tweet from any person and give us an output, as to whether it's a positive review for the movie or negative, wont that be great and a handy tool to have?!
- Lets break this problem down a bit, first we need to perform few text preprocessing which are :-
    - Lowercasing the words
    - Removing punctuation from words as they don't affect the sentiment
    - Tokenization of the words i.e. storing words in list
    - Stemming the words, for instance "retrieval", "retrieved", "retrieves" reduce to the stem "retrieve"
    - Making a dictionary consisting of words as key and values as its frequency of occurance

Basic Idea to kickstart your NLP journey

As a continuation of previous slide, you can have a hands-on exercise using my Kaggle notebook :- https://www.kaggle.com/shantanusoni/disaster-sentiment-analysis

Kaggle notebook representing implementation of an NLP exercise

THANK YOU