ODSC Session Description (2022)

Title

Sentiment Analysis and Aspect-based SA and Beyond

**Abstract (Max 150 words)**

Sentiment analysis has been one of the most popular applications of NLP and text analytics fields due to its practical usefulness in real-world business environment. Specially, its popularity is due to the pervasiveness of various digital data such as social network, blogs, online reviews, and ratings in modern internet world. People express opinions, feelings, ideas, and their mood to the digital platforms. Sentiment analysis is the practice of applying natural language processing and text analysis techniques to identifying and classifying the sentiment information from a given text so that it is a great/beneficial tool to dig on the subjective text.

This talk is for those who want to learn the introduction of sentiment analysis task and its different model choices to implement it. By listening this talk, you will become familiar and comfortable with the sentiment analysis and its different methodological approaches. Plus, I will bring up more advanced topics in this area such as issues and challenges in sentiment analysis or Aspect-based Sentiment Analysis (ABSA).

**Session Outline**

Session 1 – Understanding of Sentiment Analysis

In this session, you will get the basic understanding of sentiment analysis and its specific task branches such as subjectivity, hate-speech, sarcasm, politeness, etc. You will also learn how its methodological approaches has been changed as the computational linguistics technologies has been evolved in NLP world. I will discuss about three main different approaches for SA – Lexicon-based approach, Machine-learning approach, and Hybrid approach.

Session 2 – Hands-on examples of SA

In this session, you will get the hands-on experience of sentiment analysis with existing related open datasets. You should be able to understand how to pre-process the given text data (such as Tokenization, Stemming, Part of Speech Tagging, Stopword, Regular Expression, etc.) before you apply the different SA approaches. Then you can learn how to design a SA model with your different model choices and how to implement it in computational ways.

Session 3 – Issues and Challenges in SA Task

In this session, we will discuss the issues and challenges in sentiment analysis area such as negation, bi-polar words, domain dependency, spam and fake detection. Plus, you will learn how the new approaches has been introduced to overcome these issues and challenges in this field.

Session 4 – Aspect-based Sentiment Analysis

In this session, aspect-based sentiment analysis (ABSA) will be introduced. ABSA is rapidly growing area of sentiment analysis that has gained prominence in recent years. You will learn the concepts and the major four elements of ABSA. You will also be able to get some brief understanding on the common approaches to apply ABSA on your dataset.

Difficulty Level

Beginner-Intermediate

Background knowledge needed

Python, basic understanding of data, data pre-processing, and data mining, basic understanding of natural language processing