**Assignment No: 1 Matriculation Number: 00387718, 00413018**

**Title:** Psychological Disorder Profiling through Social Media Mining

**Abstract:**

Human psychology is a combination of behavior and emotions such as love, anger, grief, happiness, sadness and so on. Social Media is not only a platform to express our emotions, views and opinions which depicts our current state of mind but also a key factor influencing human psych. The presence of psychological instability in an individual could lead to severe health issues in the long run. Our research considers Twitter data to perform sentiment analysis and eventually profiling users based on different psychological disorders such as Depression, OCD, Anxiety. Furthermore, this method of psychological profiling could be used in the medical field to have an insight of an individual’s mental state through their online behaviour.

**Motivation:**

Human psych drives our emotions in the form of actions and behaviour. This research could help us understand the mindset of people behind their selection of words on social media platforms. Also, we would be able to implement different machine learning algorithms and language processing tools for text mining and user profiling. Our research could help medical professionals identify any potential psychological disorders a person might be suffering from based on their online behavior.

**Technology:** Python, Machine Learning Libraries - NLP, scikit-learn, numpy, pandas.

**Competition:** Several tools available today perform sentiment analysis e.g. RapidMiner but, we are unaware of any tool used to create psychological profile of a social media user.

**Milestone: (wk 14 – wk27)**

* Identifying a research topic – wk 15
* Literature Review – wk 17
* Collection of Data – wk 19
* Data Cleansing – wk 21
* Modelling Machine learning Algorithms – wk 23
* Validation of results – wk 24
* Technical paper writing first draft – wk 25
* Research paper writing final draft – wk 27

**Resources:** Data collection source – Twitter data (tweets)

**Risks:** Full implementation of this system is challenging considering the time constraints.

**References:**

* **Books:**
  + **Opinion Mining and Sentiment** **Analysis** by Bo Pang & Lillian Lee
  + **Mining Text Data** by Charu C. Aggarwal & ChengXiang Zhai
* **Research** **Papers:**
* **A Framework for profiling and friend prediction on Twitter** by Wen Zhang, Saifullah Ansari.
* **SENTIMENT ANALYSIS OF SARCASTIC SENTENCES OF TWITTER DATA** by Garima Tripathi, Mosd. Saif Wajid.