



INFORMATICS INSTITUTE OF TECHNOLOGY In Collaboration With UNIVERSITY OF WESTMINSTER Department of Computing Final Year Project

Dear Diary

Personality Based Journaling Therapy Using Natural Language

A dissertation by

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Submitted in partial fulfillment of the requirements for the BEng (Hons) Software Engineering Degree

April 2019

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Abstract

People are always in a rush to achieve things in life. These often leave people unhappy, annoyed or stressed. With the lapse of time, some of these people fall into clinical stress or depression. But little do they know that if this stress can be tackled daily, things could be much better. Medical support is not always the only way to tackle stress. Small things in life can bring people happiness and soothe a lot of their worries.

This research looks into an avenue where emotional health meets software. The concept of diarizing, a well-accepted therapeutic activity which has been around for a long time, is used in this research. The diarized input being the natural language is analyzed to determine the emotionality. Based on this emotionality, simple day today activities are suggested to undertake. Personalities play a crucial role when tackling stress. Hence, these activities are refined with personality types, age and gender.

There is a rise in the emoji usage in conversations. Thus, it was incorporated to the research by constructing a mechanism for it and the solution is able to detect emotions of emojis as well. The text sentiment generation is a unique combination which adds up to the bulk of the sentiment. Machine learning algorithms combine these sentiments and other variables to forecast probable activities. Here, the personality types are given significance in order to customize the recommended activities. This enables the recipient of the recommendation to accomplish the activities hassle free. This also emphasizes the most critical aspect of the research, which is the personality centeredness.

This research brings forth a solution, with the help of software, to an aspect which has been lacking in the Psychology domain. Nonetheless, as with any research, this too faces constraints which pave way for future improvements.

Keywords:

Natural Language Processing, Machine Learning, Journal Therapy, Personality Types, Emoji