ACADEMIC STRESS DETECTION USING MICRO-BLOGS

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Abstract

Because of the quick social and financial turn of events and escalated rivalry pressures, youth is encountering diverse mental weights originating from the study, correspondence, love, and self-acknowledgment. On the off chance that these mental weights can't appropriately be settled and discharged, it will go to mental issues, which may prompt genuine results, for example, self-destruction or forceful conduct. Ordinary face-to-face mental analysis and treatment can't satisfy the need of diminishing youngsters' pressure-totally because of its absence of practicality and assorted variety. With social media platforms turning into a mainstream media channel for adolescents' data securing, communication, self-expression, feeling discharge, the author imagines a social media platform to detect mental weights through youngsters' tweets and help adolescents to discharge their stress through providing guidance to handle the stressful situations.

After doing researches about many machine learning approaches than can be taken to solve this matter such as Linear Regression, Logistic Regression, Decision Trees, Support Vector Machine, Naive-Bayes, Random Forest and Convolutional Neural Network (CNN), the author chose the CNN approach to solve the matter because of the learning capabilities of the CNN as well as the accuracy level of the approach. And, Natural Language processing in used for data preprocessing purposes.

Experiments was done using a small data set and even for that environment the created model showed an acceptable accuracy which was evaluated by technical and domain experts. At the end the author could build a successful system to detect stress of adolescents as well as the normal stress through the system and provide the remedies accordingly.

Key Words: Machine Learning, Text Classification, CNN, Stress Detection, Social Media, Twitter data