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Emotion Detection System for Social Media Posts Related to Polycystic Ovary Syndrome

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ABSTRACT

Polycystic Ovary Syndrome (PCOS) is one of the most emotionally distressing chronic illness in women. The main issue that being dealt with this illness is that the diagnosis of it. Due to the wide range of symptoms, it showcases it made it difficult in the identification of the disease. The main symptoms that are being dealt with this disease is hirsutism, acne, overweight and irregular periods. Most of the women find it difficult in expressing their emotions towards different PCOS symptoms they have. PCOS support groups in online gives them a good opportunity to express what they truly felt about PCOS and enlighten them with more PCOS related knowledge. These platforms are mainly needed due to the lack of medical attention given towards the PCOS even though it's one of the serious medical conditions in women. Aspect based Emotion Detection (ED) has been identified as a good path to identify the most talked about topics in PCOS and the emotions that are being dealt with it by analyzing the social media posts that are related to PCOS.

PCOSENTI presents the ensembled ED architecture with aspects-based clustering of the emotions identified for the textual data presented to the system. The ensemble architecture for ED by combining ML and Transformer model together to find the emotions and clustering them according to the identified aspects/symptoms of the disease are novel results yielded by this research.

Keywords: Polycystic Ovary Syndrome, Natural Language Processing, Transformer models, Machine Learning, Topic Modelling, Data Science, Ensemble Emotion Detection System, Emotion Detection System