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SentiSync: A Robust System for Sentiment Detection and Analyzing the Mental Health Care with ML-Driven Algorithms

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Abstract: *The integration of artificial intelligence (AI) in mental health care represents a paradigm shift in the management and understanding of mental health disorders. This abstract explores the multifaceted applications of AI in mental health, emphasizing its potential to revolutionize diagnosis, treatment, and overall patient care. AI technologies, such as machine learning algorithms and natural language processing, exhibit remarkable capabilities in analysing vast datasets, identifying patterns, and extracting meaningful insights from diverse sources. In mental health, these technologies play a important role in early detection and accurate diagnosis of psychiatric conditions. By analysing a myriad of behavioural, biological, and contextual factors, AI models can provide more precise and personalized diagnostic assessments, reducing the reliance on subjective evaluations. Furthermore, AI-driven interventions are reshaping treatment approaches in mental health care. Virtual mental health assistants, powered by AI, offer scalable and accessible support, providing timely interventions and monitoring patients' well-being. Chatbots and virtual therapists equipped with sentiment analysis can involve users in natural conversations, offering empathy and support while continuously learning and adapting to individual needs.*

Keywords: SentiSync, mental health care, sentiment analysis, data collection, machine learning.

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