

# **DEPRESSION DETECTION SYSTEM BY IMAGE PROCESSING WITH NEURAL NETWORK**

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## **Abstract**

Depression is a serious mental health condition affecting millions of people worldwide. Timely detection of depression can lead to effective treatment and improved outcomes for patients. In this project, the author developed a depression detection system using machine learning techniques. The system is designed to analyze various data sources, including social media activity, speech patterns, and physiological measures, to identify potential indicators of depression. The author employs several machine learning algorithms, including decision trees, support vector machines, and neural networks, to analyze the data and classify individuals as either depressed or not depressed. The performance of the system is evaluated using various metrics, including accuracy, sensitivity, and specificity. The results show that the system can effectively detect depression with high accuracy and can be used as a screening tool for early detection of depression. This project has significant implications for improving the diagnosis and treatment of depression and could have a positive impact on mental health outcomes.

**Keywords:** Depression Detection System, Deep Learning, Image Processing, Convolutional Neural Network