

# THE IMPLEMENTATION OF FUZZY MADM AND SAW EXPERT SYSTEM FOR PRIORITIZING DEPRESSION SYMPTOM MANAGEMENT

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## **ABSTRACT**

*Depression is a mental health disorder that demands prompt and targeted intervention. A major challenge in diagnosing depression lies in its inherent subjectivity, which underscores the need for a decision-support tool capable of providing objective evaluations. This study develops an expert system utilizing the Fuzzy Multi-Attribute Decision Making (MADM) method, specifically through the Simple Additive Weighting (SAW) approach, to prioritize the treatment of depression symptoms. The system is implemented as a client-side web application using HTML, CSS, and JavaScript, allowing users to manually input symptom data. The Fuzzy SAW algorithm processes these inputs by assigning weighted values to specific criteria, producing prioritized recommendations categorized as “Immediate Attention,” “Monitor Closely,” or “Can Be Observed.” Patient data management is handled via Local Storage, while access control is role-based (Admin and Officer), ensuring system security and operational efficiency. The implementation results indicate that the system effectively minimizes diagnostic subjectivity and supports medical professionals in making informed treatment decisions.*

**Keywords:** *Expert System, Depression, Fuzzy MADM, SAW, Treatment Priority*