Researchers at the University of South Florida have developed a novel method to improve the overall classification performance of triaging psychiatric patients records.

Triaging is a process of classifying patients based on the severity of their condition. Medical personnel, including doctors and nurses, frequently make triaging decisions to maximize survival during emergency situations. In high-risk and costly settings, patient triaging is commonly used to classify patients in order to optimize the utilization of medical resources. There are problems with the current methods employed to triage medical patients where a patient needs to be correctly classified into one of the several categories, but instead ends up with the wrong classification. Therefore, there is a need for a classification technique that has higher accuracy compared to traditional classifiers.

Inventors at USF have developed a novel method of classification using a machine learning classifier that works in tandem with human experts trained to identify each specific class. The expert-assisted cascading classifier approach is a multistage, multiclass cascading classification technique that achieves higher classification accuracy. The novel framework involves domain experts at each stage of classification to further improve the performance of the classification system. The classifier may be used as a decision aid to reduce the effort of domain experts and provides a unique opportunity to include them at each stage.

**ADVANTAGES:**

- Higher classification accuracy
- Includes experts to reduce false positive cases
- Approach is generalizable to many other domains

**Improved Patient Triage System**

**Expert Assisted Cascading Classifier (EACC) Architecture**