**CME 4432 APPLICATIONS OF DECISION SUPPORT SYSTEMS ASSİGNMENT**

**by**

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**Development of a clinical decision support system for severity risk prediction and triage of COVID-19 patients at hospital admission: an international multicentre study**

The purpose of this article is to conduct a study for violence risk assessment and triage during admission of COVID-19 patients. A machine learning model based on clinical features was developed and validated in the study. The method 725 patients were used to train and validate the model. Model performances were measured using the receiver operating characteristic curve (AUC) and metrics derived from the area under the confusion matrix. Considering the literature as a contribution; The machine learning model, nomogram, and online calculator can be useful for triage at the onset of serious and critical illness and hospitalization among COVID-19 patients. As a result, elderly COVID-19 patients and out-of-hospital staff appear to be more vulnerable to a serious illness that can cause a wide variety of laboratory and CT abnormalities after hospitalization by defining criteria. Additionally, this model, based on lactate dehydrogenase, C-reactive protein, calcium, age, lymphocyte ratio, urea and creatine kinase, could be a more useful pre-screening and triage tool for risk assessment of COVID-19 patients than pneumonia severity index.

**Decision Support System of Scholarship Grantee Selection Using Data Mining**

The aim of this study is to obtain a Decision Support System for the eligibility of students who are eligible for scholarship. C4.5 Algorithm is an algorithm used to create a decision tree. This algorithm was used in the study. Test results and analysis show that the Decision Tree C4.5 algorithm is correctly applied in the prediction of high school senior students' final grades with 94.7368% accuracy. Considering its contribution to the literature, a decision support system (KDS) can be established for the eligibility of scholarship recipients for students. A scholarship decision support system (DSS) with the data mining method of the C45 algorithm can help to provide better and better efficiency than before, as well as minimizing errors in earnings reports.

**References**

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