

ICU Patients Classification System by Using CART Algorithm

Swe Swe Hlaing

University of Computer Studies, Yangon

sweswehlaing.ss@gmail.com

Abstract

Nowadays, the advancement in computing technology and the reliability of computers has led to significant changes in the way that data are collected and analyzed. This system is to predict the risk level of patients in ICU (Intensive Care Unit) in time. Based on patients' history records and current conditions, it classifies the patient's risk level. As early warning scoring systems can improve outcome by detecting critical illness earlier, the doctors in ICU can take care of patients effectively by using this system. Classification and Regression Tree (CART) use historical data with known classes to construct decision tree. CART use gini index impurity function. Then, it constructs the model or classifier to generate the form of classification rules. When new patients enter to the system, it classifies risk by using these rules. This system is implemented by using these rules. This system is implemented by using Microsoft Visual Studio 2005 and Microsoft SQL Server 2005.