

31.7.2024

Author

KEMPER, Lorenz (VORHOFF, Gerrit; WIGGER, Berthold U.)

Title

Predicting student dropout : A machine learning approach / Lorenz Kemper, Gerrit Vorhoff and Berthold U. Wigger

Publication year

2020

Source/Footnote

In: European journal of higher education. - 10 (2020) 1, S. 28 - 47

Inventory number

49468

Keywords

Hochschulen : Karlsruhe U : Studentenschaft, Studium ; Studentenschaft : Studienverhalten

Abstract

We perform two approaches of machine learning, logistic regressions and decision trees, to predict student dropout at the Karlsruhe Institute of Technology (KIT). The models are computed on the basis of examination data, i.e. data available at all universities without the need of specific collection. Therefore, we propose a methodical approach that may be put in practice with relative ease at other institutions. We find decision trees to produce slightly better results than logistic regressions. However, both methods yield high prediction accuracies of up to 95% after three semesters. A classification with more than 83% accuracy is already possible after the first semester. (HRK / Abstract übernommen)