Package: sphereML (via r-universe)

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Type Package

Title Analyzing Students' Performance Dataset in Physics Education Research (SPHERE) using Machine Learning (ML)

Version 0.1.0

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Description A shiny R package facilitating ML based analysis for physics education research (PER) purposes. The data has been made available in the CRAN repository through the spheredata package. SPHERE stands for Students' Performance in Physics Education Research (PER). The students are the eleventh graders learning physics at high school curriculum. We follow the stream of multidimensional students' assessment as probed by some research based assessments (RBAs) in PER. The goal is to predict the students' performance at the end of the learning process. Three learning domains are measured including conceptual understanding, scientific ability, and scientific attitude. Furthermore, demographic backgrounds and potential variables influencing students' performance on physics are also demonstrated. We provide teachers' judgment data as our baseline to compare the predictive results of students' performance between machine learning (ML) based analysis and teacher (human) based judgment. Click on the Tab below to explore the detail of each data further.

BugReports https://github.com/santosoph/sphereML/issues

URL https://github.com/santosoph/sphereML

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Imports shiny, shinydashboard, spheredata, lavaan, semPlot, CTT, mirt, shinycssloaders, FSelectorRcpp, randomForest, caret, caTools, pROC, GA, psych, readxl

Encoding UTF-8

RoxygenNote 7.3.2

Config/pak/sysreqs chromium cmake libglpk-dev make libicu-dev libjpeg-dev libpng-dev libxml2-dev libssl-dev zlib1g-dev

Repository https://santosoph.r-universe.dev

RemoteUrl https://github.com/santosoph/sphereml

RemoteRef HEAD

RemoteSha 24c951b25bfbe70b68384baea9efab0f7115bab8

Contents

`sphereML` *A shiny application of sphereML*

Description

In this package, machine learning based analysis can be performed to predict students' performance outcomes in physics.

Usage

```
sphereML()
```

Value

A user interface of shiny application.

Examples

```
library(sphereML)
sphereML()
```

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