Auto Selection Test Question Tagging and Performance Prediction based on Student's Profile

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Interns Required: 1

Problem Description:

Part 1: The aim of part 1 of the project is to use the data generated during the online selection test for e-YRC 2015 to determine the accuracy of the manual difficulty tagging process. Each question is manually assigned a difficulty and the project will aim to find the accuracy and also suggest auto corrections based on the performance of students towards the questions and its assigned difficulty.

Part 2: Given the profile of a student taking the test, create a Machine Learning model to deduce its performance in the selection test based on the current year's data.

Task List:

Task No.	Task	Deadline
1	Learning Machine Learning and Data Analysis Concepts	3 days
2	Conditioning the data and deciding on the parameters to be used	2 days
3	Implementing the finalised data analysis algorithm on the data (Part 1)	8 days
4	Calculating accuracy and auto categorization of questions based on the results of the previous task (Part 1)	2 days
5	Developing Machine Learning algorithm for performance prediction of students given their profile (Part 2)	10 days
6	Testing / Documentation / Final analysis report	5 days

Prerequisite: Data Analysis, Machine Learning algorithms, any data processing library/system (Octave, R Language, Weka)

Hardware Required:

None

Deliverables:

1. Documented Code for Auto Categorization and performance prediction.
2. Documentation (User Manual, Analysis Report etc).

Software Required:

Linux OS, any data processing language/system

References:

1. Octave : http://www.gnu.org/software/octave/

2. Coursera Machine Learning Course: https://www.coursera.org/course/ml