Submission Deadline	Marks and Feedback
fore 10am on: e-17/12/2019 Fri 9/12/2019 (if required an tension could be anted by Student itigation Team)	20 working days after deadline (L4, 5 and 7) 15 working days after deadline (L6) 10 working days after deadline (block delivery)

Submit assignment

Marks and feedback

nit title & de	CIS111-6: Intelligent Systems and Data Mining
ssignment mber and le	**Assignment 1: Data Mining Solutions for Direct Marketing Campaign**
sessment pe	WR
eighting of sessment	50%
nit learning tcomes	1. Analyse a Data Mining technique capable of supporting practitioners to make reliable decisions which require predictive modelling, for example, in a Business scenario 2. Demonstrate results of using an efficient technique which is capable of finding a solution to a given predictive problem represented by a data set 3. Evaluate the accuracy of the technique in terms of differences between the predicted values and the given data

Completing Your Assignment

hat am I required to do in this assignment?

Task

tudents will develop a DM solution for aving cost of a direct marketing ampaign by reducing false positive vasted call) and false negative (missed ustomer) decisions. Working on this ssignment, students can consider the llowing scenario.

Bank has decided to save the cost of direct marketing campaign based on hone calls offering a product to a client. cost efficient solution is expected to upport the campaign with predictions or a given client profile whether the ient subscribes to the product or not. A artup company wants to develop an novative DM technology which will be ompetitive on the market. The Manager ill interview and hire Data Analysts. he team will analyse the existing chnologies to design a DM solution inning the competition. A team anager will choose the best solution r the market competition in terms of ost efficiency. The evaluation of the eveloped solutions will be made on the st data. The costs will be defined for oth the false positive and false egative predictions.

← 2019BLK2 Assignment 1…

CI Machine Learning repository escribing a Bank Marketing problem.

tudents will apply for one of roles: (i) roup manager, (ii) group member, or ill work individually. The group anager will arrange comparison and anking of solutions designed in a group, nd will have additional 5 points. Each udent will run individual experiments to nd an efficient solution and describe fferences in experimental results.

Method and Technology

o design a solution, students will se Data Mining techniques such as ecision Trees and Artificial Neural etworks. Examples of solutions will be rovided in R Scripting using (i) a Cloud echnology CoCalc or (ii) an advanced evelopment suit RStudio free for tudents.

Data

he Assignment 1 Bank Marketing data

Edit with the Docs app

Make tweaks, leave comments and share with others to edit at the same time.

NO, THANKS GET THE APP

repared with a template. BREO imilarity level of reports must be < 0%.

there a size limit?

000 words on average

hat do I need to do to pass? (Threshold Expectations om UIF)

1. Apply Decision Tree technique to solve the Bank Marketing task presented by a set of customer profiles
2. Analyse problems which are required to be resolved in order to develop a solution providing a high prediction accuracy on a given data set.

ow do I produce high quality work that merits a good ade?

1. Identify a set of parameters which are required to be adjusted within DM techniques in order to optimise the solution in terms of prediction accuracy
2. Explain how the parameters of a DM technique influence the prediction accuracy
3. Run experiments in order to verify the solution designed on the given data set
4. Analyse and compare the results of the experiments in a group and with the known from the literature.

ow does assignment relate to what we are doing in heduled sessions?

ata Mining techniques and use cases eveloped in R will be considered during ectures and tutorials.

Marks and Feedback

ow will my assignment be marked?

ur assignment be marked according to the threshold pectations and the criteria on the following page.

u can use them to evaluate your own work and timate your grade before you submit.

Weight, %	Lower 2nd – 50-59%	Upper 2nd – 60-69%	1st
Analysis (20)	Fair analysis of the basic approaches	Relatively good analysis of the relevant literature, mainly covering the state-of-art	Exce anal rele liter fully the art
Design (50)	Fair design of a basic solution providing a reasonable performance within a single set of parameters	Design of a solution providing a fair performance in a series of experiments with different sets of parameters	Desi solu prov perf com kno the in a exp with sets para
Conclusion (30)	Fair conclusion on the experimental results obtained within a single set of parameters	Conclusion on and comparison of the experimental results obtained within two different sets of parameters	Con and com the exp resu obta with mul of para den a so whi prov com perf