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|  | **Faculty of Computing, Engineering and Science** | Final mark awarded:\_\_\_\_\_ |

**Assessment Cover Sheet and Feedback Form 2017-18**

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| Module Code:  CS4S767 | Module Title:  Data Mining | | Module Lecturer:  Berndt Muller, Andrew Ware |
| Assessment Title:  Data Mining Survey | | | Assessment No.  1 |
| No. of pages submitted in total including this page:  Completed by student | | | Word Count of submission  (if applicable): Completed by student |
| Date Set:  15-Jan-2018 15:00:00 | | Submission Date:  16-Feb-2018 23:55:00 | Return Date:  16-Mar-2018 23:55:00 |

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| ***Part A: Record of Submission (to be completed by Student)*** | |
| **Extenuating Circumstances**  If there are any exceptional circumstances that may have affected your ability to undertake or submit this assignment, make sure you contact the Advice Centre on your campus prior to your submission deadline. | |
| **Fit to sit policy**:  The University operates a fit to sit policy whereby you, in submitting or presenting yourself for an assessment, are declaring that you are fit to sit the assessment. You cannot subsequently claim that your performance in this assessment was affected by extenuating factors. | |
| **Plagiarism and Unfair Practice Declaration:**  By submitting this assessment, you declare that it is your own work and that the sources of information and material you have used (including the internet) have been fully identified and properly acknowledged as required[[1]](#footnote-1). Additionally, the work presented has not been submitted for any other assessment. You also understand that the Faculty reserves the right to investigate allegations of plagiarism or unfair practice which, if proven, could result in a fail in this assessment and may affect your progress. | |
| **Intellectual Property and Retention of Student Work:**  You understand that the University will retain a copy of any assessments submitted electronically for evidence and quality assurance purposes; requests for the removal of assessments will only be considered if the work contains information that is either politically and/or commercially sensitive (as determined by the University) and where requests are made by the relevant module leader or dissertation supervisor. | |
| **Details of Submission:**  Note that all work handed in after the submission date and within 5 working days will be capped at 40%[[2]](#footnote-2). No marks will be awarded if the assessment is submitted after the late submission date unless extenuating circumstances are applied for and accepted (Advice Centre to be consulted). | |
| You are required to acknowledge that you have read the above statements by writing your student number(s) in the box: | Student Number(s): |

**IT IS YOUR RESPONSIBILITY TO KEEP RECORDS OF ALL WORK SUBMITTED**

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| **Part B: Marking and Assessment**  **(to be completed by Module Lecturer)** |
| This assignment will be marked out of 100%  This assignment contributes to 50% of the total module marks.  This assignment is bonded |
| **Learning Outcomes to be assessed** (as specified in the validated module descriptor <https://icis.southwales.ac.uk/> ):  *1) Display knowledge of different data mining and Big Data tasks and appropriate models/algorithms evaluating these with respect to their accuracy.2) Demonstrate the ability to apply data mining and Big Data concepts in appropriate contexts.* |

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| **Feedback/feed-forward** (linked to assessment criteria):   * Areas where you have done well: * Feedback from this assessment to help you to improve future assessments: * Other comments | | |
| **Mark:** | **Marker’s Signature:** | **Date:** |
| * **Work on this module has been marked, double marked/moderated in line with USW procedures.** | | |
| *Provisional mark only: subject to change and/or confirmation by the Assessment Board* | | |

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| **Part C: Reflections on Assessment**  **(to be completed by student – optional)** | |
| **Use of previous feedback:**  In this assessment, I have taken/took note of the following points in feedback on previous work: | |
| **Please indicate which of the following you feel/felt applies/applied to your submitted work**   * A reasonable attempt. I could have developed some of the   sections further.   * A good attempt, displaying my understanding and learning, with   analysis in some parts.   * A very good attempt. The work demonstrates my clear   understanding of the learning supported by relevant literature and  scholarly work with good analysis and evaluation.   * An excellent attempt, with clear application of literature and   scholarly work, demonstrating significant analysis and evaluation. | |
| **What I found most difficult about this assessment:** |  |
| **The areas where I would value/would have valued feedback:** |  |

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|  | Fail | Narrow Fail | 3rd Class / Pass | Lower 2nd Class / Pass | Upper 2nd Class / Merit | 1st Class / Distinction |
| Part 1 Survey 50% | * No meaningful understanding of data -mining methods * Very poor discussion of data-mining fundamentals * No data-mining problem types described in good detail * Very poor structure of the essay * Very poor referencing | * 1-2 modelling methods discussed * Poor discussion of data-mining fundamentals. Only rudimentary coverage of CRISP-DM * Only one data-mining problem type described in good detail * Poor structure of the essay * Poor referencing | * 3 modelling methods discussed * Satisfactory discussion of data-mining fundamentals with nearly complete coverage of CRISP-DM * Two data-mining problem types described in good detail * Satisfactory structure of the essay * Satisfactory referencing | * 4 modelling methods discussed * Good discussion of data-mining fundamentals with complete coverage of CRISP-DM * Three data-mining problem types described in good detail * Good structure of the essay * Good referencing | * 5 modelling methods discussed * Very good discussion of data-mining fundamentals going somewhat beyond coverage of only CRISP-DM * Four data-mining problem types described in good detail * Very good structure of the essay * Very good referencing | * More than 5 modelling methods discussed * Excellent discussion of data-mining fundamentals going significantly beyond coverage of CRISP-DM * Five or more data-mining problem types described in good detail * Excellent structure of the essay * Excellent referencing |
| Part 2 Scenario 50% | * Very poor use of data-mining lifecycle and CRISP-DM * Very poor depth of scenario analysis and appropriateness of the suggested data-mining approach * Very poor understanding of the relevance of data mining for the given scenario * Very poor appraisal of data-mining potential for future developments related to the scenario | * Poor use of data-mining lifecycle and CRISP-DM. Only one phase described in sufficient detail * Poor depth of scenario analysis and appropriateness of the suggested data-mining approach * Poor understanding of the relevance of data mining for the given scenario * Poor appraisal of data-mining potential for future developments related to the scenario | * Satisfactory use of data-mining lifecycle and CRISP-DM. Only two phases described in sufficient detail * Satisfactory depth of scenario analysis and appropriateness of the suggested data-mining approach * Satisfactory understanding of the relevance of data mining for the given scenario * Satisfactory appraisal of data-mining potential for future developments related to the scenario | * Good use of data-mining lifecycle and CRISP-DM. Three phases described in sufficient detail * Good depth of scenario analysis and appropriateness of the suggested data-mining approach * Good understanding of the relevance of data mining for the given scenario * Good appraisal of data-mining potential for future developments related to the scenario | * Very good use of data-mining lifecycle and CRISP-DM. At least four phases described in sufficient detail * Very good depth of scenario analysis and appropriateness of the suggested data-mining approach * Very good understanding of the relevance of data mining for the given scenario * Very good appraisal of data-mining potential for future developments related to the scenario | * Excellent use of data-mining lifecycle and CRISP-DM. All phases described in sufficient detail * Excellent depth of scenario analysis and appropriateness of the suggested data-mining approach * Excellent understanding of the relevance of data mining for the given scenario * Excellent appraisal of data-mining potential for future developments related to the scenario |
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# Task

## Part 1: Survey

Write an essay detailing and discussing the foundations of data mining, data mining techniques and tools, as well as application areas.

## Part 2: Scenario

Appraise the following scenario and recommend a data-mining strategy. Give detailed reasons for your choice.

Mobile payment methods are becoming ubiquitous. These payment methods are implemented as applications on mobile phones or wearables. They have a potential to offer additional services for the consumers, such as the contextual presentation of targeted marketing campaigns based on the consumers' behaviours and preferences. Consider a possible future integration of Scan-as-you shop (as available in some supermarkets) techniques with the payment application.

### Note

Make sure you

* include a cover sheet containing your Student ID, module code, and assignment title.
* attribute the source of all material you use.
* put direct quotes in quotation marks.

1. University Academic Misconduct Regulations [↑](#footnote-ref-1)
2. Information on exclusions to this rule is available from the Advice Centre at each Campus [↑](#footnote-ref-2)