



MONASH University
Information Technology

FIT5158
Customer relationship management and data mining

Unit Guide

Semester 1, 2011

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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FIT5158 Customer relationship management and data mining - Semester 1, 2011

This unit provides an understanding of the business value of customer relationship management and how data mining technology can be used to improve organizational interaction with customers. Building a business around the customer relationship is the aspiration of many modern organizations. Customer relationship management and data mining has been combined together to provide the required concepts, techniques, technology and tools to achieve this goal. The unit discuss how IT and IT based techniques can be used for customer segmentation, clustering and classification, market basket analysis and association rule mining in addition to traditional CRM.

Mode of Delivery

Caulfield (Evening)

Contact Hours

2 hrs lectures/wk, 1 hr laboratory/wk

Workload

Students will be expected to spend a total of 12 hours per week during semester on this unit. This will include:

- two-hour lecture and
- one-hour tutorial (or laboratory) (requiring advance preparation)
- a minimum of 3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.

- You will need to allocate up to 5 hours per week in some weeks, for use of a computer, including time for newsgroups/discussion groups.

Unit Relationships

Prerequisites

FIT9004 or FIT9017

Chief Examiner

David Dowe

Campus Lecturer

Caulfield

David Dowe

Contact hours: To Be Confirmed - e-mail for other times/appointment

Clayton

David Dowe

Contact hours: To Be Confirmed - e-mail for other times/appointment

Tutors

Caulfield

Sumith Matharage

Asanka Fonseka

Learning Objectives

At the completion of this unit students will be able to:

- use software tools and techniques for identifying business opportunities;
- plan direct marketing campaigns and product introductions;
- analyse and understand customer churn with data mining tools;
- create stable and accurate predictive models and interpret results;
- provide advise to management on CRM;
- advise management on data mining techniques and tools.

Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:
 - a. engage in an internationalised world
 - b. exhibit cross-cultural competence
 - c. demonstrate ethical values

critical and creative scholars who:

- a. produce innovative solutions to problems
- b. apply research skills to a range of challenges
- c. communicate perceptively and effectively

Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

Assessment Task	Value	Due Date
Assignment 1 - SQL Server and Data Warehousing	20%	Week 7, Friday 15 April 2011
Assignment 2 - Data Mining	20%	Week 11, Friday 20 May 2011
Examination 1	60%	To be advised

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

Feedback

Our feedback to You

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments without comments

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through SETU, Student Evaluation of Teacher and Unit. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, and on student evaluations, see:

<http://www.monash.edu.au/about/monash-directions/directions.html>

<http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html>

Previous Student Evaluations of this unit

If you wish to view how previous students rated this unit, please go to

<https://emuapps.monash.edu.au/unitevaluations/index.jsp>

Required Resources

WEKA Data Mining software

SQL Server (2008)

This and other any software needed will be made available or provided.

Unit Schedule

Week	Date*	Activities	Assessment
0	21/02/11		No formal assessment or activities are undertaken in week 0
1	28/02/11	CRM and Customer Intelligence	
2	07/03/11	Storing Data for Customer Intelligence	
3	14/03/11	Data Warehousing with SQL Server 2005	
4	21/03/11	Dimensional Modeling	
5	28/03/11	Data Warehouse and Analytical CRM	
6	04/04/11	Online Analytical Processing	
7	11/04/11	Introduction to Business Data Mining	Assignment 1 due Week 7, Friday 15 April 2011
8	18/04/11	Customer Relationship Management (CRM)	
Mid semester break			
9	02/05/11	Decision Trees	
10	09/05/11	Neural Networks	
11	16/05/11	Collaborative Filtering and User Profiling	Assignment 2 due Week 11, Friday 20 May 2011
12	23/05/11	Customer Life Cycle and Data Mining	
	30/05/11	SWOT VAC	No formal assessment is undertaken SWOT VAC

*Please note that these dates may only apply to Australian campuses of Monash University. Off-shore students need to check the dates with their unit leader.

Assessment Policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit

Assessment Tasks

Participation

- **Assessment task 1**

Title:

Assignment 1 - SQL Server and Data Warehousing

Description:

Details will be provided.

Weighting:

20%

Criteria for assessment:

Details will be provided.

Due date:

Week 7, Friday 15 April 2011

- **Assessment task 2**

Title:

Assignment 2 - Data Mining

Description:

Details will be provided.

Weighting:

20%

Criteria for assessment:

Details will be provided.

Due date:

Week 11, Friday 20 May 2011

Examinations

- **Examination 1**

Weighting:

60%

Length:

3 hours

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

None

Assignment submission

Assignment coversheets are available via "Student Forms" on the Faculty website:

<http://www.infotech.monash.edu.au/resources/student/forms/>

You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process:

<http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html>.

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:

<http://policy.monash.edu.au/policy-bank/academic/education/index.html>

Key educational policies include:

- Plagiarism
(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html>)
- Assessment
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-p>)
- Special Consideration
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.h>)
- Grading Scale
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html>)
- Discipline: Student Policy
(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html>)
- Academic Calendar and Semesters (<http://www.monash.edu.au/students/key-dates/>);
- Orientation and Transition (<http://www.infotech.monash.edu.au/resources/student/orientation/>);
and
- Academic and Administrative Complaints and Grievances Policy
(<http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy>)

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at www.monash.edu.au/students The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to <http://www.lib.monash.edu.au> or the library tab in my.monash portal for more information. Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis

- Website: <http://adm.monash.edu/sss/equity-diversity/disability-liaison/index.html>;
- Telephone: 03 9905 5704 to book an appointment with a DLO;
- Email: dlu@monash.edu

- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus.

Reading List

Practical Business Intelligence with SQL Server 2005 by John C. Hancock and Roger Toren, Addison Wesley, 2006

The Microsoft Data Warehousing Toolkit by Joy Mundy and Warren Thornthwaite, John Wiley & Sons, 2006