MIS779
Decision Analytics in Practice

Capstone Unit

Dr. Humza Naseer

DEAKIN UNIVERSITY

Course Overview

- Teaching team
- Reading material
- Cloud Deakin Tour
- Portfolio Assessment
- Class/Seminar Structure
- Client – World Vision Australia
- Business Analytics tools
- Next Steps…

About me

Academic

Masters, PhD, Honorary Fellow

Research Fellow

Lecturer

Practitioner

Business Analytics
Consultant

Subject matter expertise
Airlines

The Data Warehousing Institute
(TDWI)

3

Teaching Team

- Nasir Khansefid

- Kia Kashi

- Adil Bilal

- Milisha Patel

- Nitin Aggarwal

- Ivy Long

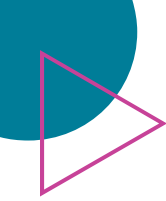- Abhinav Shrivastava

- Sarah Beilby

Unit Chair: Humza Naseer

Reading Material

https://www.linkedin.com/in/davenporttom/
Website: https://www.tomdavenport.com/

Business Analytics Job - Activity

I see myself working in .... Business Analytics role.

Scan

OR Join at menti.com | use code 7957 3037

MIS779 – Decision Analytics in Practice - Capstone

What?

- A capstone unit provides students with the opportunity to apply their course learning in a practical way that contributes to professional growth.

Why?

- Apply theoretical knowledge to practical scenarios.

- Develop problem-solving, critical thinking, teamwork, and communication skills.

- Engage with a client to work on a real-world business problem.

How?

- Involves a mix of weekly briefings, group work, consultations, and presentations.
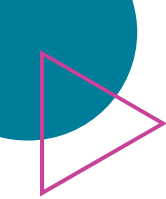
MIS779 - Cloud Deakin Tour

Unit Learning Outcomes

ULO	These are the Learning Outcomes (ULO) for this unit. At the completion of this unit, successful students can:	Deakin Graduate Learning Outcomes
ULO1	Critically analyse a business problem or opportunity for a real client and propose a range of options and recommendations.	GLO4: Critical thinking GLO5: Problem solving
ULO2	Apply established tools and models to underpin project research and analysis.	GLO1: Discipline-specific knowledge and capabilities
ULO3	Effectively communicate complex business issues and findings to both specialists and non-specialists	GLO2: Communication
ULO4	Collaborate constructively within a project team produce and share integrated solutions to complex business problems.	GLO7: Teamwork
ULO5	Critically reflect on ethical, social and legal implications associated with the business challenges and implementation of the solutions presented for the client.	GLO8: Global citizenship

Portfolio Assessment

Details	Summative Assessment Task 1 (Individual/Group)
Brief description of assessment task	Portfolio The portfolio contains presentations (both video and face-to-face) business reports (Individual and group) and an individual reflection report. Part A: Client Brief (Individual) Part B: Client Brief (Group) Part C: Presentation (Group) Part D: Final project report (Group) Part E: Reflection report (Individual)

Part A, 10%: Client Brief (Individual)

Your Task:

You are required to produce a 1 page (maximum) document outlining your understanding of the clients' business problem. Remember you must only identify the problem rather than providing any recommendations at this stage. Please use the provided template on Teams.

Deliverables:

- Please submit your client problem statement as a Microsoft word document into the Part A Assignment folder on CloudDeakin, no later than the time and date listed in the unit guide.

Part B, 20% : Client Brief (Group)

Your Task:

You are required to produce a 1 – 2 page team document outlining your teams understanding of the clients' business problem, and client data set. Remember you must only identify the problem rather than providing any recommendations at this stage. You will be able to draw on your individual client problem statements for your team document. Please use the provided template on Teams.

Deliverables:

- Please submit your client problem statement as a Microsoft word document into the Part B Assignment folder on CloudDeakin, no later than the time and date listed in the unit guide.

- A declaration of each student's individual contribution.

Part C, 10%: Presentation (Group)

Your Task:

Each team is required to prepare a 5-minute video presentation outlining the team's understanding of the client problem and possible solutions. You are required to conduct this evaluation against the clients' requirements, which would include, but not be limited to, extensive investigation, analysis and interpretation of the data provided.

Deliverables:

- Your video presentations will be made available to the client for possible feedback. Please submit your video in MP4 format into the Part C Assignment folder on CloudDeakin, no later than the time and date listed in the unit guide.

- A declaration of each student's individual contribution.

Part D, 40%: Final project report (25%) and Presentation (15%) (Group)

Your Task:

- Recommendations for the client including all supporting documentation.

- The report is required to be in a "professional business report" format, max 10 pages, 12 point font inclusive.

- A statement on how you determine if your project is a success for the client (link back to your client problem statement and understanding of data from Parts A-C).

Deliverables:

- Project report submitted to the Part D Assignment folder on CloudDeakin, no later than the time and date listed in the unit guide

- A 7-10-minute presentation providing details of the team's final solutions to the problem and recommendations. Presentations will be made available to the client. (link back to your client problem statement and understanding of data from Parts A-C).

- A declaration of each student's individual contribution.

Part E, 20%: Reflection report (Individual)

Your Task:

This is a self-reflection report of 1000 words. Each student will need to reflect on their experience during the course of this unit in terms of their thinking, advanced analytics teamwork, managing the capstone project, learning, and making connections to their past learning and knowledge, as well as their understanding and learning of ethical issues involved in real-world data analytics projects.

Deliverables:

- Individual contribution in the project activities

- Reflection and response to feedback

- Achievement of learning outcomes

Unit Weekly Activities

Week	Commencing	Special learning activities	Assessment due date
1	3 March 2025	Project introduction, data definition and planning, the introduction of client and assessment definitions	
2#	10 March 2025	Consultation	
3	17 March 2025	Consultation	Part A due, 8 PM, 20 March
4	24 March 2025	Consultation	
5	31 March 2025	Consultation	Part B due, 8 PM, 03 April
6	7 April 2025	Consultation	
7^~	14 April 2025	Consultation	Part C due, 8 PM, 17 April
8	28 April 2025	Consultation	
9	5 May 2025	Consultation	
10	12 May 2025	Consultation/Group Presentations	
11	19 May 2025	Group Presentations	Part D due, 8 PM, 22 May
12	26 May 2025		Part E due, 8 PM, 29 May
13-14*	2 June 2025		End-of-unit assessment and exam period

\# Labour Day public holiday: **Monday 10 March 2025** - University closed

^ Easter/Intra-trimester break: **Friday 18 April - Sunday 27 April 2025** (between weeks 7 and 8)

~ ANZAC Day public holiday: **Friday 25 April 2025** - University closed

* King's Birthday public holiday: **Monday 9 June 2025** - University closed

Class/Seminar Structure

- Overview of Weekly Activities – 30mins (Recorded) Life as a business analytics consultant!!!

Break out

- Group Mentoring – 2hrs 30mins (Not Recorded)

  - You are expected to meet with your group during this time so all tasks can be managed.

  - Every group member should be present

  - Confidential discussion with each group

  - Initially, a confidentiality agreement is to be signed by all students

  - The purpose of the weekly meetings is to ensure achievable analytical targets are identified and milestones are met

  - No solutions (nor analysis) will be provided by the teaching team (consultation / mentoring the project's progress only)

Expectations - Students

What is expected from you...

- Apply your Business Analytics learnings to solve client problem

- To commit an average of 150-hours over the trimester, this includes reviewing the learning materials, completing the background and/or supplementary readings as required, and to completing your assessment tasks.

- **To read, understand, sign, and submit the Non-Disclosure Agreement (NDA) form via CloudDeakin dropbox.**

- To be punctual, to come to your mentoring sessions and to provide a valuable, meaningful and expert contribution to your group (although not mandatory, I/we am/are certainly expecting this – and also, of course, will the other members of your group).

- To use all of your previous learning to manage the projects deliverables, and to exhibit professionalism as a valued team member.

- As this is a new Unit (for you), and quite different to any Units you have yet undertaken, make sure that you plan for the unexpected.

Act as a Business Analytics professional

Expectations – Teaching Team

What you can expect from the teaching team…

- Weekly consultation and advice regarding your project and your progress
- The teaching team will not provide you with a solution for your project questions
- Advice of a general nature only will be given
- To answer your posts and emails within 2 business days throughout the trimester – faster if we can
- Humza will be available for private unit-related discussions as required
- **If you find yourself struggling, don't wait, …tell us immediately!**

Business Analytics Tools

- MS Power BI

- RapidMiner Studio

- SPSS

- R/ R Studio

- Python

- Tableau

- MS Excel

And others.

Gartner (June 2024)

Magic Quadrant for Analytics and Business Intelligence Platforms

Source: https://www.gartner.com/doc/reprints?id=1-2HW1JC8Q&ct=240620&st=sb

Client…

World Vision Australia

Who are we?

We are part of the global World Vision Partnership that has nearly 35,000 staff in 100 countries.

For over 70 years, World Vision has worked alongside communities, donors, partners and governments to create opportunities for children and their families to change their futures.

The generosity of everyday Australians create the kind of change that lasts for generations and feels incredible to be part of. This change happens through development, relief and advocacy work around the world.

29.6
MILLION PEOPLE
in 52 countries received humanitarian assistance

10.3
MILLION PEOPLE
in 52 countries were reached with food support

3
MILLION PEOPLE
gained access to clean water, including safe drinking water

1.6
MILLION CHILDREN
benefitted from child protection activities

*Statistics from World Vision International 2022 Global Annual Report

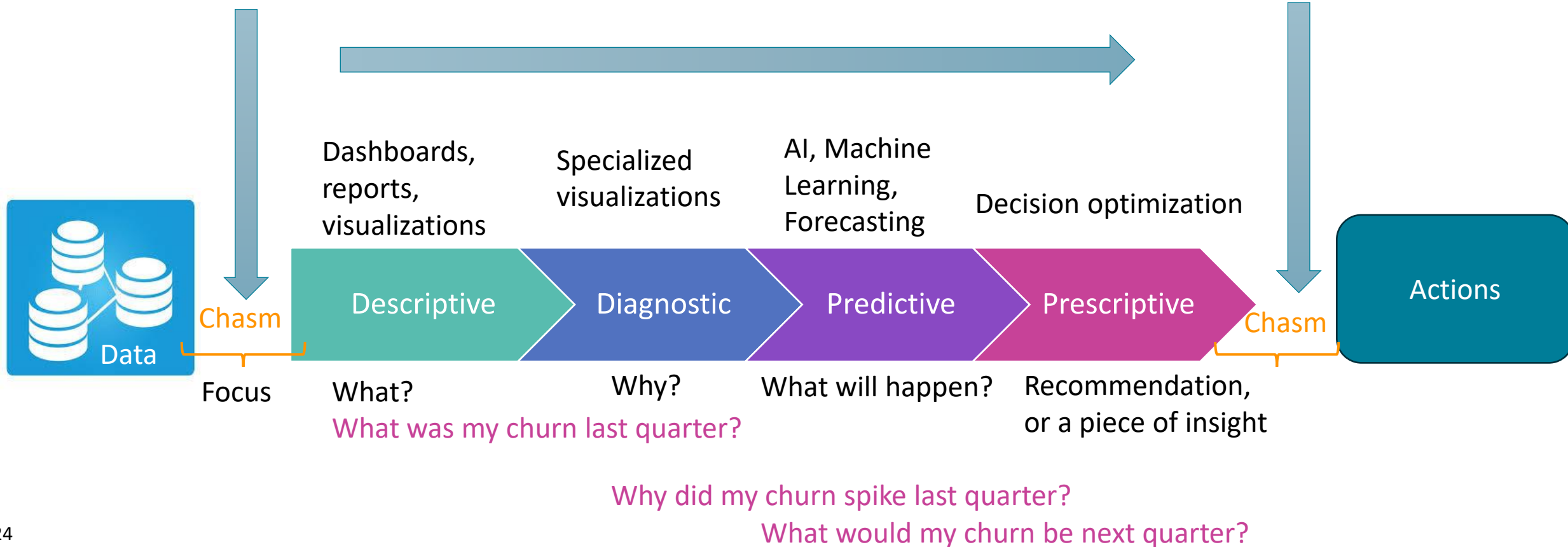# Life as a Business Analytics consultant...

From Data to actionable insights

- Data Integration
- Data Pipelines

- Data Modelling
- Automation

- Business Processes and Workflows
- Use cases

Dashboards, reports, visualizations

Specialized visualizations

AI, Machine Learning, Forecasting

Decision optimization

Data

Chasm | Descriptive | Diagnostic | Predictive | Prescriptive | Chasm | **Actions**

Focus

What?

Why?

What will happen?

Recommendation, or a piece of insight

What was my churn last quarter?

Why did my churn spike last quarter?

What would my churn be next quarter?

Group Allocations

- We will use MS Teams for Group work and general discussion

- 5-6 members in each group

- We will start working groups from Week 3

Group work – (Agile Methodology, Scrum Framework)

Roles:

Product owner: Defines the vision & prioritizes backlog

Mentor

Scrum Master: Facilitates the process & removes obstacles

Development Team: Builds & delivers the product (students)

Activities:

Sprint planning, Weekly Standups, Sprint review with the mentor, Sprint retrospective, Prioritize work based on value

Note: Sprint here is based on assessment task due date.

Artifact:

Consultation meeting summary: Discussion points, actionable items, tasks allocated

Final assessment will be reflecting on this

Teaching Team meet and greet with students!

Good luck!

Questions?