DAT7001

Data Handling and Decision Making

<u>Part 1: Essay</u>

Date for Submission: Please refer to the timetable on ilearn

(The submission portal on iLearn will close at 14:00 UK time on the date of submission)

Version: V5

Assignment Brief

As part of the formal assessment for the programme you are required to submit a **Data Handling and Decision Making** essay. Please refer to your Student Handbook for full details of the programme assessment scheme and general information on preparing and submitting assignments.

Learning Outcomes:

After completing the module, you should be able to:

1.   Analyse methods of auditing data holdings and gap identification.

2.   Critically analyse theoretical and core processes of data manipulation and mining.

3.   Utilise and evaluate basic statistical concepts.

4.   Appreciate ethical issues and their importance to data handling and decision making.

5.   Develop a practical ability with data analysis and data mining methods to analyse and interpret data sets.

6.   Make recommendations based upon the findings from data analysis.

7.   **Graduate Attribute** – Effective Communication

     Effectively communicate both, verbally and in writing, using a range of media widely used in relevant professional context.

Guidance

Your assignment should include: a title page containing your student number, the module name, the submission deadline and the exact word count of your submitted document; the appendices if relevant; and a reference list in AU Harvard system. You should address all the elements of the assignment task listed below. Please note that tutors will use the assessment criteria set out below in assessing your work.

You must not include your name in your submission because Arden University operates anonymous marking, which means that markers should not be aware of the identity of the student. However, please do not forget to include your STU number.

Maximum word count: 1000 words

Please refer to the full word count policy which can be found in the Student Policies section here: Arden University | Regulatory Framework

Please note the following:

Students are required to indicate the exact word count on the title page of the assessment.

The word count includes everything in the main body of the assessment (including in text citations and references). The word count excludes *numerical data in tables, figures, diagrams, footnotes, reference list and appendices. ALL other printed words ARE included in the word count.*

Please note that exceeding the word count by over 10% will result in a 10-percentage point deduction.

Version: V5

Assignment Task – Essay

This assignment is worth 20% of the marks for this module.

Assignment Part 1: Data Gap Analysis

Data gap analysis can be referred to as the process of inspecting an existing or planned big data infrastructure with the aim of identifying issues, risks and inefficiencies associated with the use of data in organisation's operations. Such analysis requires an integrated view on technical, managerial and legal aspects of organisational data. This activity represents a key initial step towards implementation of data-driven business decision-making.

For this assignment, you are required to demonstrate the data gap analysis for a case study of your choice.

Case study choice. You are encouraged to relate this assignment to your workplace, so that the outcomes can immediately be applied to improving its data analytics processes. However, if you have no immediate workplace to analyse or its use for the assignment purposes is not possible, then you have an option of adopting another project (such as a commercial start-up, community project or social enterprise) which would take advantage of data driven decision-making. Either an existing or prospective project can be discussed. In the latter case, the data infrastructure might not exist yet, however, you have an opportunity to propose its design and analyse it for any potential gaps.

NB1: You can use any publicly available datasets, e.g. historical data or national statistics (a sample list of public data sources can be found on the News and FAQs forum of the module). However, these datasets must be applied to in-depth analysis of your workplace or another specific project or activity which you are fully familiar with. **Generic analysis of any third-party company is not acceptable for this assignment.**

NB2: Organisation name, other business or stakeholder particulars and any personally identifiable information can be fully anonymised.

Task 1.1

Perform data gap analysis for an organisation or project of your choice. Your response should include:

- Brief background to the organisation or project in question.
- Identification of the key data sources and datasets available to the organisation.
- Inspection of data integrity and current or potential gaps in data analytics and data protection.

(350 words)
(30 marks)
(LO: 1)

Task 1.2

Using the findings of Task 1.1, recommend improvements to the organisational data analytics processes. These should be centred around the following:

- Reorganisation of the current data-driven processes to streamline and enhance the data analytics and decision making.

- Roadmap to the development or enhancement of the big data infrastructure.

- Compliance aspects of the proposed changes in data analytics.

(450 words)
(50 marks)
(LOs: 1 & 4)

Task 1.3

Explain how the proposed big data analytics can be used in the organisational decision making. This includes the following:

- Identification of a range of business decisions that can be supported by the enhancements in data analytics proposed in Task 1.2.

- Formulation of a single decision of your choice out of those identified, in terms of the related business question to be solved, involved stakeholders and data available for its support. (You will then be required to analyse this decision systematically in Part 2 of this Assignment.)

(200 words)

End of questions

Formative Feedback

You have the opportunity to submit a complete draft of this assignment to receive formative feedback.

The feedback is designed to help you develop areas of your work and it helps you develop your skills as an independent learner.

If you are a distance learning student, you should submit your work, by email, to your tutor, no later than 2 weeks before the actual submission deadline. If you are a blended learning student, your tutor will give you a deadline for formative feedback and further details.

Formative feedback will not be given to work submitted after the above date or the date specified by your tutor - if a blended learning student.

Referencing Guidance

You **MUST** underpin your analysis and evaluation of the key issues with appropriate and wide ranging academic research and ensure this is referenced using the AU Harvard system.

 Follow this link to find the referencing guides for your subject: Arden Library

Submission Guidance

Assignments submitted late will not be accepted and will be marked as a 0% fail.

Your assessment can be submitted as a single Word (MS Word) or PDF file, or, as multiple files.

If you chose to submit multiple files, you must name each document as the question/part you are answering along with your student number ie Q1 Section A STUXXXX. **If you wish to overwrite your submission or one of your submissions, you must ensure that your new submission is named exactly the same as the previous in order for the system to overwrite it.**

You must ensure that the submitted assignment is all your own work and that all sources used are correctly attributed. Penalties apply to assignments which show evidence of academic unfair practice. (See the Student Handbook which is available on the A-Z key information on iLearn.)

Assessment Criteria (Learning objectives covered - all)

Level 7 is characterised by an expectation of students' expertise in their specialism. Students are semi-autonomous, demonstrating independence in the negotiation of assessment tasks (including the major project) and the ability to evaluate, challenge, modify and develop theory and practice. Students are expected to demonstrate an ability to isolate and focus on the significant features of problems and to offer synthetic and coherent solutions, with some students producing original or innovative work in their specialism that is potentially worthy of publication by Arden University. A clear appreciation of ethical considerations (as appropriate) is also a prerequisite.

Grade	Mark Bands	Generic Assessment Criteria
Distinction	80%+	Outstanding analysis of key issues and concepts/. Outstanding development of conceptual structures and argument, making consistent use of scholarly conventions. Outstanding *research skills, independence of thought, an extremely high level of intellectual rigour and consistency, exceptional expressive / professional skills, and outstanding creativity and originality.* Outstanding *academic/intellectual skills. Work pushes the boundaries of the discipline and* demonstrates an awareness of relevant ethical considerations. *Work may be considered for publication by Arden university*.
	70-79%	Excellent analysis of key issues and concepts/. Excellent development of conceptual structures and argument, making consistent use of scholarly conventions. *Excellent research skills, independence of thought, an extremely high level of intellectual rigour and consistency, exceptional expressive / professional skills, and substantial creativity and originality.* *Excellent academic/intellectual skills. Work pushes the boundaries of the discipline and* demonstrates an awareness of relevant ethical considerations. *Work may be considered for publication by Arden university*..
Merit	60-69%	Very good level of competence demonstrated. High level of theory application. Very good analysis of key issues and concepts. Development of conceptual structures and argument making consistent use of scholarly conventions. Some evidence of original thought and a general awareness of relevant ethical considerations.
Pass	55-59%	A good performance. A good knowledge of key issues and concepts. Fairly descriptive, with some analysis of existing scholarly material, and some argument development. Limited evidence of original thought. Some awareness of relevant ethical considerations. Good professional skills (where appropriate).
Pass	50-54%	A satisfactory performance. Basic knowledge of key issues and concepts. Generally descriptive, with restricted analysis of existing scholarly material and little argument development. Use of scholarly conventions inconsistent. The work lacks original thought. Limited awareness of relevant ethical considerations. Satisfactory professional skills (where appropriate).

Marginal Fail	40-49%	*Limited research skills impede use of learning resources and problem solving. Significant problems with* structure/accuracy in expression. *Very weak a*cademic professional skills. *Limited use of scholarly conventions.* Errors in expression and the work may lack structure overall
	39% and below	A poor performance in which there are substantial gaps in knowledge and understanding, underpinning theory and ethical considerations. *Little evidence of research skills, use of learning resources and problem solving. Major problems with* structure/ accuracy in expression. Professional skills not present. *Very weak a*cademic professional skills. *No evidence of use of scholarly conventions.*

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