



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

LEVEL/ LEFEL: 4

MODULE CODE/ COD Y MODIWL: ACCB4002
Data Analysis and Visualisation

ASSESSMENT TYPE/ MATH O ASESU: COURSEWORK

ASSESSMENT/COMPONENT/ ASESAD/CYDRAN: 2

COMPONENT WEIGHTING/ PWYSAU'R CYDRAN: 50 %

WORD COUNT/ NIFER Y GEIRIAU: N/A

SUBMISSION DETAILS/ MANYLION CYFLWYNO:

- All files of the website and the database should be zipped and submitted electronically to Moodle.
- Make sure that Your Name , Your Student Number, Your Module Title, Assignment Title and Your Module Lecturer's Name are clearly shown on the front page of your assignment
- All assignments must be submitted electronically to Moodle and the report on Distributed Database has to be submitted through Turnitin.



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BACHELORS DEGREE ASSIGNMENT SPECIFICATION (SOAC)

Programme:	BSc Cloud Computing		
Assignment Title:	Data Analysis and Visualisation		
Hand Out Date:	2nd Week of Term	Submission deadline:	Please refer to the assessments schedule published on Students' Hall in Moodle and the Assessment Board on campus

Referencing:	In the main body of your submission you must give credit to authors on whose research your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have read or quoted in order to complete this assignment (e.g. for books: surname of author and initials, year of publication, <u>title of book</u> , edition, publisher: place of publication).
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Late submission will result in a late penalty mark, as follows:

Up to one week late, maximum mark of 40% for first attempts and 0% for resubmissions. No work will be accepted more than one week after the submission deadline
(Academic Quality Handbook 2016/17 7.5 (5))

Module Learning Outcomes:

1. Select and apply appropriate statistical methods for the analysis of well-defined problems
2. Demonstrate an ability to present nominal, ordinal, categorical and network data in forms that enable the easy understanding of the data
3. Demonstrate an ability to rearrange data in order to extract hidden information
4. Apply colour, position, size, shape and icons to encode information creatively and effectively to solve well-defined problems in information visualisation

TASK DESCRIPTION

In a recent BBC (UK) news, it has been identified that the infection rate of Covid – 19 is varied between white people and BAME in the UK. In order to identify the ratio and the truthfulness of the findings, 50 different white and BAME patients have been selected. All the patients age is between 20 and 50 years. Based on the data in the table below, you are required to analyse the ratio of infection rate and truthfulness of the findings.

Patient No	White Patient	BAME	Patient No	White Patient	BAME
1	20	23	26	50	50
2	22	34	27	32	33
3	25	44	28	20	45
4	26	45	29	30	47
5	29	29	30	40	20
6	27	27	31	44	32
7	48	35	32	35	22
8	43	45	33	28	28
9	55	44	34	40	30
10	43	30	35	43	34
11	27	40	36	38	32
12	34	50	37	33	44
13	44	50	38	34	47
14	50	50	39	50	30
15	37	41	40	22	44
16	35	43	41	37	29
17	33	47	42	45	40
18	40	32	43	20	30
19	42	31	44	44	40
20	48	20	45	33	24
21	49	26	46	20	50
22	30	28	47	38	46
23	33	30	48	35	30
24	43	39	49	25	27
25	50	50	50	40	50

Your analysis should include the following factors:

- The development of an appropriate set of testable hypotheses for the experiment
- The testing of your hypotheses to significance level of $p=0.10$, $p=0.01$, and $p=0.02$
- The presence of any outliers in the data and the effect that they have on the outcome
- Any other features of the data that appear during your investigation of the dataset

- Any other factors that might affect the results but have not been considered in the stated experimental set-up, together with ideas as to how you might control these factors

This analysis should be documented in a report of no more than 2000 words illustrated with visualisations.

GUIDANCE FOR STUDENTS IN THE COMPLETION OF TASKS

Marks will be awarded for:

- ❖ (45%) Analysis
 - Descriptions of the dataset
 - Development of appropriate hypotheses for the analysis
 - Selection (and justification) of appropriate techniques to perform the analysis
 - Selection (and justification) of appropriate techniques to present the results of the analysis.
- ❖ (45%) Practical Application and Deployment
 - Application of selected analysis techniques
 - Interpretation of the results of the analyses
 - Presentation of the results in both textual and, where appropriate, diagrammatical form.
- ❖ (10%) Skills for Professional Practice
 - Presentation of the paper in an appropriate professional format
 - Correct use of technical English
 - Suitable labelling and referencing strategies.

WHAT YOU SHOULD SUBMIT

The paper (but not the assignment specification) should be submitted via Turnitin.