

**CCT College Dublin Continuous Assessment**

<b>Programme Title:</b>	<i>Diploma in Data Analytics for Business – L7</i>		
<b>Cohort:</b>	<i>PT - Sept 2023</i>		
<b>Module Title(s):</b>	<i>Data Visualisation and Communication</i>		
<b>Assignment Type:</b>	<i>Individual</i>	<b>Weighting(s):</b>	<i>50%</i>
<b>Assignment Title:</b>	<i>CA2</i>		
<b>Lecturer(s):</b>	<i>Marina Iantorno</i>		
<b>Issue Date:</b>	<i>05/03/2024</i>		
<b>Submission Deadline Date:</b>	<i>24/03/2024</i>		
<b>Late Submission Penalty:</b>	Late submissions will be accepted up to <b>5</b> calendar days after the deadline. All late submissions are subject to a penalty of <b>10%</b> of the mark awarded. Submissions received more than 5 calendar days after the deadline above <b><u>will not</u></b> be accepted and a mark of 0% will be awarded.		
<b>Method of Submission:</b>	<b>Moodle</b>		
<b>Instructions for Submission:</b>	<i>You must submit a PDF/Word report AND a Jupyter Notebook file with the code and the outcome</i>		
<b>Feedback Method:</b>	<b>Results posted in Moodle gradebook</b>		
<b>Feedback Date:</b>	<i>Approximately 3 weeks after submission</i>		

**Learning Outcomes:**

Please note this is not the assessment task. The task to be completed is detailed on the next page.

This CA will assess student attainment of the following minimum intended learning outcomes:

1. Evaluate the best visualisation approach for specific problem areas.
2. Identification of anomalies/trends through visualisation.
3. Communicate the information gained on the visualisations in a report format.

Attainment of the learning outcomes is the minimum requirement to achieve a Pass mark (40%). Higher marks are awarded where there is evidence of achievement beyond this, in accordance with QQI

*Assessment and Standards, Revised 2013*, and summarised in the following table:

Percentage Range	CCT Performance Description	QQI Description of Attainment	
		Level 6, 7 & 8 awards	Level 9 awards
90% +	Exceptional	Achievement includes that required for a Pass and in <b>most</b> respects is significantly and consistently beyond this	Achievement includes that required for a Pass and in <b>most</b> respects is significantly and consistently beyond this
80 – 89%	Outstanding		
70 – 79%	Excellent		
60 – 69%	Very Good	Achievement includes that required for a Pass and in <b>many</b> respects is significantly beyond this	Achievement includes that required for a Pass and in <b>many</b> respects is significantly beyond this
50 – 59%	Good	Achievement includes that required for a Pass and in <b>some</b> respects is significantly beyond this	Attains all the minimum intended programme learning outcomes
40 – 49%	Acceptable	Attains all the minimum intended programme learning outcomes	
35 – 39%	Fail	Nearly (but not quite) attains the relevant minimum intended learning outcomes	Nearly (but not quite) attains the relevant minimum intended learning outcomes
0 – 34%	Fail	Does not attain some or all of the minimum intended learning outcomes	Does not attain some or all of the minimum intended learning outcomes

Please review the CCT Grade Descriptor available on the module Moodle page for a detailed description of the standard of work required for each grade band.

The grading system in CCT is the QQI percentage grading system and is in common use in higher education institutions in Ireland. The pass mark and thresholds for different grade bands may be different from what you have experience of in the higher education system in other countries. CCT grades must be considered in the context of the grading system in Irish higher education and not assumed to represent the same standard the percentage grade reflects when awarded in an international context.

## Background

A mid-sized e-commerce platform specialising in lifestyle and wellness products has seen significant growth over the past few years. The platform operates in multiple regions across the globe and serves to a diverse demographic. Despite the growth, the company faces hard competition from both established and emerging online retailers. To maintain its growth trajectory and keep (or improve) its market position, the company aims to understand its current market dynamics, customer demographics, product performance, and regional sales patterns to create personalized offers to its clients.

The company has accumulated a large amount of data from sales, customer, and product data but has not fully exploit this data to gain insights into market trends, customer preferences, and potential areas for expansion. The leadership team believes that a detailed market analysis based on data analytics can uncover valuable insights to inform strategic decisions, improve customer satisfaction, and identify new market opportunities.

You will find the data on the Moodle page.

## Assessment Details

As the business intelligence analyst of this company, your task is to perform a comprehensive market analysis using the company's dataset. You are expected to:

1. Assess the quality of the dataset. Identify and address any missing values, outliers, or inconsistencies (EDA process). [0-10%]
2. Conduct descriptive statistical analysis to understand the current scenario and perform the necessary visualisations. This includes, but not limited to, demographic distribution of the customer base, age, gender, preferences, etc. [0-25%]
3. Use visualizations to compare the performance of different product categories. Highlight top-performing products and categories, as well as those underperforming. [0-25%]
4. Analyse regional sales data to identify strong and weak markets. You can use geo-visualizations at this point. [0-20%]
5. Compile your findings into a comprehensive report. The report should include an introduction, methodology, detailed analysis supported by visualizations, and strategic recommendations based on your analysis. Your report must include at least 10 visualisations, and it must contain 1500 words (+- 10%). [0-20%]

You must identify trends/patterns/anomalies underlined in the data and do some research to explain what could be happening in that area/period/scenario/etc. This means that you should write a piece of work that contains an introduction to the selected topic, argument, explanations, research based on the outcome of your visualisations, and conclusions. Your report must be written for subject matter experts of Marketing and Business.

## Submission Requirements

All assessment submissions must meet the minimum requirements listed below. Failure to do so may have implications for the mark awarded.

All assessment submissions must:

- Add required word count if applicable
- Submission of the report in PDF/Word format and. JPYNB file containing the code
- Minimum word count expected is 1500 words (excluding references and appendix).
- Be submitted by the deadline date specified or be subject to late submission penalties

- Use [Harvard Referencing](#) when citing third party material
- Be the student's own work.
- Include the CCT assessment cover page.

#### **Additional Information**

- Lecturers are not required to review draft assessment submissions. This may be offered at the lecturer's discretion.
- In accordance with CCT policy, feedback to learners may be provided in written, audio or video format and can be provided as individual learner feedback, small group feedback or whole class feedback.
- Results and feedback will only be issued when assessments have been marked and moderated / reviewed by a second examiner.
- Additional feedback may be requested by emailing the lecturer up to one week after the grade is released. Additional feedback may be provided as individual, small group or whole class feedback. Lecturers are not obliged to respond to email requests for additional feedback where this is not the specified process or to respond to further requests for feedback following the additional feedback.
- Following receipt of feedback, where a student believes there has been an error in the marks or feedback received, they should avail of the recheck and review process and should not attempt to get a revised mark / feedback by directly approaching the lecturer. Lecturers are not authorised to amend published marks outside of the recheck and review process or the Board of Examiners process.
- Students are advised that disagreement with an academic judgement is not grounds for review.
- For additional support with academic writing and referencing students are advised to contact the CCT Library Service or access the [CCT Learning Space](#).
- For additional support with subject matter content students are advised to contact the [CCT Student Mentoring Academy](#)
- For additional support with IT subject content, students are advised to access the [CCT Support Hub](#).