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**CCT College Dublin Continuous Assessment**

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| **Programme Title:** | Higher Diploma Data Analytics for Business / Higher Diploma AI | | |
| **Cohort:** | Part-Time Feb2023 | | |
| **Module Title(s)**: | Strategic Thinking | | |
| **Assignment Type:** | Group / Practical | **Weighting(s)**: | 40 % |
| **Assignment Title:** | Presentation / Draft Paper / Individual Reflective Report | | |
| **Lecturer(s)**: | James Garza ([james@cct.ie](mailto:james@cct.ie)) | | |
| **Issue Date:** | 9 March 2023 | | |
| **Submission Deadline Date:** | 7th May 2023 @ 11:55 pm | | |
| **Late Submission Penalty:** | Late submissions will be accepted up to **5** calendar days after the deadline. All late submissions are subject to a penalty of **10%** of the mark awarded.  Submissions received more than 5 calendar days after the deadline above **will not** be accepted, and a mark of 0% will be awarded. | | |
| **Method of Submission:** | **Moodle** | | |
| **Instructions for Submission:** | Your work must be uploaded to Moodle.   * Report paper in Word or PDF format ONLY. Word count: ~3000. * Slides used in the presentation in PDF format. * Every group member must submit Individual Reflective Report. | | |
| **Feedback Method:** | **Results posted in Moodle gradebook** | | |
| **Feedback Date:** |  | | |

**Learning Outcomes:**

Please note that 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. Critically evaluate the relationship between information technology infrastructure and organisational competitive advantage.

2. Critically analyse and select open source and proprietary software with a view to developing IT

solutions for business and business-related IT problems.

3. Utilise tools of strategic business analysis to evaluate the current macro and micro business environment with a view to formulating future action plans.

4. Research emerging technologies and critically evaluate their impact on business and business information systems in general.

5. Understand the relationship between data gathering/utilisation and business intelligence and its impact on industry policy.

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:

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| **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 **most** respects is significantly and consistently beyond this | Achievement includes that required for a Pass and in **most** 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 **many** respects is significantly beyond this | Achievement includes that required for a Pass and in **many** respects is significantly beyond this |
| 50 – 59% | Good | Achievement includes that required for a Pass and in **some** 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.

**Assessment Task**

This assessment aims to evaluate your ability to apply project management methodology to develop and execute a capstone project in a group setting. Your group will select a dataset, conduct exploratory data analysis, pre-process the data, implement at least one machine learning algorithm and present your findings effectively. The capstone project will be based on a dataset of your choice. The capstone project can be from any domain, such as finance, marketing, or any other.

The group will submit a comprehensive report detailing the project plan, business understanding, data understanding, data preparation, and machine learning implementation. The report should also include a summary of the findings, conclusions, and any future recommendations. The report should be presented in a clear and concise manner, and it should demonstrate the group's ability to work collaboratively using a project management methodology. The project management methodology should enable you to identify the roles and responsibilities of each group member, prioritise tasks and monitor the progress of the capstone project.

You are now required to present your findings and initial results with the aid of two elements: a presentation and a report paper.

* You will create a maximum 10-minute presentation where you will include the following items. Remember that this is a guideline. You can include other items not mentioned below or remove items irrelevant to your project as long as you are within the allocated time.
  + Introduction.
  + Business description.
    - Hypothesis.
    - General goal.
    - Success criteria/indicators.
  + Technologies used.
    - Models
    - Libraries
    - Machine Learning Algorithm **(at least 1 implementation required!)**
    - etc...
  + What has been accomplished so far.
    - **Data: datasets, source, attributes, dimensions, descriptive statistics, data visualisation, data preparation (required!).**
    - Models.
  + Challenges encountered.
    - Including strategies used to overcome them.
  + Results and analysis… next steps.
  + Conclusion.

**\*\* Note that there is NO code on slides, and every team member must present in the presentation.**

* You will also have to create a **group** report paper that includes the following:
  + All the elements that apply from the presentation described above.
  + Citations and references where necessary (i.e., where you make claims or statements about technology and its performance).
  + Professional structure, clear, easy to follow, with coherent flow between sections.

This is a two-semester module, and the capstone project will continue into semester two.

Students are advised to review and adhere to the submission requirements documented after the assessment task.

**Individual Reflective Report:**

* Regarding the individual reflective report, what were your contributions to all aspects of the project, from selecting the dataset to the final presentation and report? What did you particularly enjoy working on the project? Finally, what was your contribution to the creation of a PowerPoint presentation and report?
* In terms of team dynamics, how did you work well within the team and were able to leverage each other's strengths to deliver a high-quality project? How did you contribute to the communication and were able to communicate effectively, share ideas and provide constructive feedback to improve the quality of the group work? However, if there were some challenges in coordinating schedules and balancing workload, how were you flexible and adapting to changing circumstances?
* In terms of the learning journey, how did this project help you develop a deeper understanding of data analytics / AI?
* Overall, how did this project help you develop valuable technical and collaboration skills that can be applied in future projects?
* Minimum word count of 500.

Further details of the assessment:

1. **Groups will be selected randomly by your lecturer. No one can leave a group or be kicked out of a group. If there is an issue in the group all group members will need to meet with the programme lead or dean of CCT. Your lecturer cannot approve group changes. The maximum group size is 3.**
2. **Support your analysis with references and properly reference ALL sources that you have used. WARNING – If you do not support your work, you will not receive a high mark!**
3. **Your lecturer will decide the order of presentations.**
4. WORD COUNT: 3,000 words. If your report is too short or long, you may *lose up to 10% of marks*!
5. If you go over the allotted time, you may lose up to 10% of marks.

**Submission Requirements**

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

* Submissions must be completed by Sunday, 7th May @ 23:59.
* Include a professional group report paper in PDF or word format of about 3,000 words.
* Slides used in the presentation in PDF format.
* You must submit your work by the deadline date specified. Otherwise, you will be subject to late submission penalties.
* Use [Harvard Referencing](http://40.115.124.2/sp/subjects/guide.php?subject=harvardref) when citing third-party material.
* Make sure you submit your own work**. No plagiarism will be tolerated.**
* Include the CCT assessment cover page.

**Additional Information**

* Avoid having slides that are heavy on text or code. Remember that slides are meant to be a tool for the presenter and the audience as a guide for the presentation.
* In any situation, the lecturers are entitled to call you in for a further explanation of your code/report/slides.
* 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 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](http://learningspace.cct.ie/subjects/index.php).
* For additional support with subject matter content students are advised to contact the [CCT Student Mentoring Academy](https://moodle.cct.ie/mod/forum/view.php?id=55148)
* For additional support with IT subject content, students are advised to access the [CCT Support Hub](https://moodle.cct.ie/course/view.php?id=1861).

**Marking Scheme Summary**

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| **Description** | **Weighting** |
| Presentation.   * Slide set is comprehensive and includes all the relevant technical information. * Data/data processing/feature engineering has been explained correctly with the aid of visualisation tools and metrics. * Methodology and results have been explained properly. * The team has been able to handle questions. * Presentation covers all relevant topics of the project. | 40 |
| Report Paper   * Professional group report is comprehensive and includes all the relevant technical information. * Data/data processing/feature engineering has been explained correctly with the aid of visualisation tools and metrics. * Methodology is sensible and explained appropriately. * Model has been discussed. * Analysis of results and conclusions are sensible. * Referencing and citations have been done correctly. | 20 |
| Individual Reflective Report   * What was your contribution to the project? What did you particularly enjoy working on the project? * How did you work well within your team? How did you contribute to the communication and share ideas with the team? * What was your learning journey? How did you develop a deeper understanding of data analytics / AI? * What collaboration skills did you learn? How can these skills be applied to future projects? | 40 |
| **TOTAL** | **100** |