

**CONTINUOUS ASSESSMENT / ASSIGNMENT**

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| **Programme Title/Year:** | **Higher Diploma in Data Analytics for Business** |
| **Module Title(s):** | **Data Visualization Techniques** |
| **Lecturer Name(s)** | **James Garza** |
| **Assessment Title:** | **CA1\_DVis\_Lvl8** |
| **Assessment Type:** | **INDIVIDUAL** |
| **Assessment Weighting:** | **50%** |
| **Date Issued:** | **11/09/2023** |
| **Due Date (Deadline):** | **8/10/2023** |
| **Late Submission Penalty:** | Late submissions will be accepted up to 5 days after the deadline. All late submissions are subject to a penalty of **10%** of the mark awarded.  Submissions received more than 5 days after the deadline above **will not** be accepted. |
| **Method of Submission:** | **Moodle** |
| **Feedback Method:** | **Results posted in Moodle grade book** |
| **Instructions for Submission:** | **Assessment must be submitted before 11:55 pm Sunday 15th October 2023, as Jupyter Notebook file.**  The word count is 1,250 words.  **The File Must be saved as “YourName\_DVis\_CA1.ipynb”** |

**Module Learning Outcomes Assessed:**

MLO:

1. Critically evaluate visualisation approaches with respect to their suitability for different problem areas.

(Linked to PLO 5)

1. Select appropriate data visualisation techniques for a given use case, data characteristics.

(Linked to PLO 3, PLO 4)

1. Propose, design, develop, and implement an interactive data visualisation solution, for a given data set, detailing the rationale for approach and visualisation techniques choices made during development.

(Linked to PLO 4, PLO 5)

**Assignment Detail**

You are required to use the dataset contained within the file “Fotune500.csv” and then perform the following analysis:

You are required to explain what you plan on doing with the data. E.g., Why did you choose the specific visualisations? Why did you choose specific observations for a visualisation? How did you Engineer your Data? Etc. **This must be detailed in the Mark-up of the Jupyter Notebook and include the rationale for your choice.**

Generate a plot that details the 5 top Companies by Revenue for each Decade. E.g., Top 5 for 1950-1959, 1960-1969, etc. This must be a single plot, either static or interactive.

Plot a graph depicting the distribution of the “Revenue” in the top 20 Companies in 1971.

Find out and visualise which Top 10 Company’s profit increased the most between 1990 and 1999. This Must be a Single plot, either static or interactive.

Observe and plot the average revenue by decade; this must be a single plot, either static or interactive.

**Requirements**

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| Explain what you plan on doing with the data. E.g., Why did you choose the specific visualisations? Why did you choose specific observations for a visualisation? How did you Engineer your Data? Etc. This must be detailed in the Mark-up of the Jupyter Notebook and include the rationale for your choice. |
| Generate a plot that details the 5 top Companies by Revenue for each Decade. E.g., Top 5 for 1950-1959, 1960-1969, etc. This must be a single plot, either static or interactive. |
| Plot a graph depicting the distribution of the “Revenue” in the top 20 Companies in 1971. |
| Find out and visualise which Top 10 Company’s profit increased the most between 1990 and 1999. This must be a single plot, either static or interactive. |
| Observe and plot the average revenue by decade. This must be a single plot, either static or interactive. |

**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, 15th October 2023 @ 23:59.
* Visualisations must be submitted as a Jupyter Notebook artefact, and the report will be in the markup of the notebook.
* Word count is 1,250 words.
* 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**

* 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)

**Marking Schedule**

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| **Description** | **Weighting** |
| *Explain what you plan on doing with the data. E.g., Why did you choose the specific visualisations? Why did you choose specific observations for a visualisation? How did you Engineer your Data? Etc. This must be detailed in the Mark-up of the Jupyter Notebook and include the rationale for your choice.* | 30% |
| *Generate a plot that details the 5 top Companies by Revenue for each Decade. E.g., Top 5 for 1950-1959, 1960-1969, etc. This must be a single plot, either static or interactive.* | 20% |
| *Plot a graph depicting the distribution of the “Revenue” in the top 20 Companies in 1971.* | 15% |
| *Find out and visualise which Top 10 Company’s profit increased the most between 1990 and 1999. This must be a single plot, either static or interactive.* | 20% |
| *Observe and plot the average revenue by decade. This must be a single plot, either static or interactive.* | 15% |
| Poor Referencing, Spelling, Grammar, and Layout will incur marking penalties. |  |
| **Total** | **100%** |