ASSESSMENT BRIEF

Programme	**BSc Computing, Web Design and Development**		
Module Title	**Data Visualisation**		
Module Code	**CMP-X302-0**		
Module Level		**Assessment Type(s)**	Project comprising Artefact and Report
Word Length / Duration	2,500 words	**% contribution to module mark**	100%
	7th of January, 2026	**Format/Location of submission**	Moodle Submission Box
Assessment Feedback date:	31st of January, 2026		

Learning Outcomes

LO1: Select and apply appropriate visualisation techniques for diverse data types and scenarios

LO2: Evaluate the effectiveness of data visualisations for a particular task

LO3: Design and develop visualisations and present data-driven visual narratives

Employability and Professional Skills

Completing this module equips learners with a powerful combination of technical, analytical, and professional skills that directly enhance employability. Through topics such as data preparation, visual encoding, colour theory, and storytelling with data, students develop the ability to transform complex datasets into clear, insightful, and visually compelling narratives. This fosters strong data literacy, critical thinking, and problem-solving skills, key assets in roles requiring data-driven decision-making. By mastering Python visualisation libraries and understanding perceptual and design principles, learners also gain technical proficiency and creative communication abilities, enabling them to present insights effectively to diverse

	audiences. Professionally, this module strengthens presentation, collaboration, and digital communication skills, preparing graduates for analytical, managerial, and strategic positions across a wide range of industries.

Assessment Requirements

The summative assessment for this module comprises of three mandatory deliverables: (1) a written report, (2) an artefact (Python code implementation) (3) a screen-recording of the code presentation, collectively accounting for 100% of the final mark. The dataset for completing this coursework, the World happiness data, is provided on Assessment section of this module on Moodle.

Deliverable Task: 1 (Report)

Compile a 2,500 words report (excluding Reference and Appendices) that contains following aspects using the provided "template":

1. ***Introduction & Storytelling Context***
   - *Explain why understanding global happiness matters and set a narrative tone for the report.*
   - *State the aims and expected outcomes of the analysis.*
2. ***Data Preparation***
   - *Describe your data source(s), its structure, and your initial observations.*
   - *Explain any cleaning steps (as needed): handling missing values, renaming columns, correcting data types, etc.*
   - *Mention and discuss the purpose of any derived or transformed variables created in this stage of the processing of your data.*
3. ***Exploratory Data Analysis (EDA)***
   - *Summarise key trends and distributions using summary statistics and simple plots.*
   - *Identify interesting relationships or anomalies that inspire research questions.*
   - *Present initial findings to justify further exploration.*
4. ***Research Questions (Data-Driven Decision Making)***
   - *Formulate 2–3 insightful research questions based on your EDA findings (e.g., "How does Generosity relate to positive affect across regions?").*
   - *Briefly justify why each question is relevant and what decisions or insights it may inform.*
5. ***Visualisation and Analysis***
   - *For **each research question**, produce **three well-designed visualisations** (using Python libraries such as Matplotlib, Seaborn etc.)*
   - *Include captions, correct labels, and explanations of the visual encodings used.*
   - *Discuss and interpret what patterns or insights does each visualisation reveal?*

- *Synthesise findings from and compare the three visuals per research question.*

6. ***Discussion and Interpretation***
   - *Summarise the main findings and what they imply for global or regional happiness.*
   - *Reflect on how the data visualisations 'answer' the research questions.*
   - *Mention limitations or biases in the data and in your methodologies along with possible improvements.*
7. ***Conclusion (Storytelling Closure)***
   - *Tie back to your initial narrative: what story does the data tell overall?*
   - *Suggest recommendations or insights for policymakers, organisations, or researchers.*
8. ***References***
   - *Include references for citations to the dataset and relevant literature*
9. ***Appendix (if applicable)***
   - *Can contain the additional charts not included in the main body but was discussed briefly.*

Deliverable Task: 2 (Artefacts)

a) Create a Jupyter notebook (.ipynb), named with your student number (ABC0101010.py/.ipynb) that contains all of your code implementation for this coursework.

This must include:

- *All of your data preparation, EDA, and visualisation code.*
- *Executable and well-organised code.*
- *Clear comments to explain what each code block does and why.*
- *Clearly labelled visualisations to match those referenced in the report.*

b) Screen Recording of the Code Presentation (.mp4 file):

- *Five to seven minutes screen recorded demonstration on the executed code blocks from the originally submitted .ipynb file with brief explanation on the steps (i.e., data loading and preparation, EDA, visualisations, etc.) sequentially with voiceover.*

The Python implementation file (`.ipynb`) and the dataset (World-Happiness-report`.csv`) must be collocated in the working directory (same folder) to ensure proper execution. This single-directory configuration is mandatory for the assessment.

Python code should successfully load the dataset from the working directory on the university machines with Python `3.10+` runtime environment and produce the reported output without issues; otherwise, you will fail the assessment.

Marking Criteria

No.	Criteria	Weight (%)	Outstanding	Excellent	Good	Satisfactory	Not Adequate	Not Attempted
1	**Storytelling & Introduction** (Clarity of purpose, narrative flow, context setting)	**8%**	Engaging, clear narrative connecting data context and purpose; strong rationale and clear aims. (8 marks)	Well-written context and aims; minor gaps in narrative flow. (6.5 marks)	Clear introduction but lacks a strong story or contextual link. (4.8 marks)	Some attempt to introduce context; weak rationale or unclear purpose. (3.2 marks)	Minimal or confusing introduction; lacks story or purpose. (1.6 marks)	No introduction or context provided. (0 marks)
2	**Data Preparation** (Cleaning, transformation, explanation)	**10%**	Comprehensive preparation: all steps clearly explained and justified; reproducible. (10 marks)	Mostly complete preparation with minor omissions; clear explanations. (8 marks)	Adequate preparation with basic cleaning; some steps not justified. (6 marks)	Limited cleaning or unclear documentation of steps. (4 marks)	Poorly prepared data; major errors or unexplained transformations. (2 marks)	No data preparation evident. (0 marks)
3	**Exploratory Data Analysis (EDA)** (Summary stats, trends, identification of insights)	**12%**	Insightful and thorough EDA; clear trends and relationships identified; visuals support findings. (12 marks)	Strong EDA; good interpretation with minor gaps in insight depth. (9.6 marks)	Reasonable EDA: describes trends but lacks deep interpretation. (7.2 marks)	Basic EDA; some visualisation but limited insight. (4.8 marks)	Incomplete or inaccurate EDA; poor understanding of data. (2.4 marks)	No EDA performed. (0 mark)
4	**Research Questions & Data-Driven Decision Making**	**12%**	Research questions are highly relevant, data-informed, and clearly justified; promote strong analytical	Relevant questions with clear justification; good link to data insights. (9.6 marks)	Logical questions with basic justification; some connection to data. (7.2 marks)	Simple or vague questions; limited justification or insight. (4.8 marks)	Poorly formed or irrelevant questions; not data driven. (2.4 marks)	No research questions stated. (0 mark)

			reasoning. (12 marks)					
5	**Visualisations & Technical Implementation (Artefacts)**	**20%**	Three or more high-quality, well-designed visuals per question; clear labels, colour use, and visual encoding; technically accurate and well-commented Python code. (20 marks)	Clear and effective visuals; mostly well-labelled and accurate; code well-written with few issues. (16 marks)	Adequate visuals; minor design flaws or limited diversity of plots; code understandable. (12 marks)	Basic visuals; limited design consideration; unclear or partially working code. (8 marks)	Poorly executed visuals; incorrect or unreadable code; weak understanding of libraries. (5 marks)	No visuals or code submitted. (0 marks)
6	**Interpretation & Discussion** (Analytical depth, accuracy, linkage to visuals)	**10%**	Deep, accurate interpretation; clear linkage between visuals, data, and insights; shows critical evaluation. (10 marks)	Strong interpretation; good linkage and understanding; minor inaccuracies. (8 marks)	Reasonable discussion; mostly descriptive, with limited depth. (6 marks)	Some interpretation but lacks depth or clarity. (4 marks)	Minimal or inaccurate interpretation; misreads data or visuals. (2 marks)	No discussion or interpretation. (0 marks)
7	**Storytelling Closure & Conclusion** (Synthesis of findings, reflection, recommendations)	**10%**	Excellent synthesis; coherent narrative closure; insightful reflection and meaningful recommendations. (10 marks)	Good synthesis: conclusions follow logically; some reflection provided. (8 marks)	Logical conclusions; limited reflection or recommendations. (6 marks)	Simple summary without integration of insights. (4 marks)	Weak or unsupported conclusion; lacks closure. (2 marks)	No conclusion provided. (0 marks)
8	**Professional Presentation**	**6%**	Exceptionally clear,	Well-structured	Clear overall structure but	Acceptable	Disorganised or unclear	No structure

	& Structure (Formatting, readability, citations, coherence)		well-structured, professional layout; correct citations; visuals integrated seamlessly. (6 marks)	and readable; mostly professional presentation; few formatting issues, , citations are mostly correct. (4.8 marks)	minor formatting or flow issues, citations are considerably correct. (3.6 marks)	structure; inconsistent formatting; visuals poorly integrated, citations are partially correct. (2.4 marks)	presentation; difficult to follow, , citations are somewhat correct. (1.2 marks)	or presentation effort evident. (0 marks)
9	**Technical Documentation in Jupyter Notebook** (Comments, reproducibility, clarity)	**6%**	Clear, thorough comments explaining each step; code fully executable; professional readability. (6 marks)	Well-commented and readable; minor executability or clarity issues. (4.8 marks)	Adequately commented; minor executability issues, understandable but lacks full detail. (3.6 marks)	Limited commenting; partially executable code.	Poorly documented; unclear logic or errors in code. (1.2 marks)	No documentation or notebook submitted. (0 marks)
10	**Screen Recording code Presentation** (Clarity, explanation of artefacts/code, communication)	**6%**	Clear, confident explanation of code and process; demonstrates full understanding of the concepts coded for; professional tone and flow. (6 marks)	Good explanation and structure; minor clarity issues; shows good understanding. (4.8 marks)	Reasonable overview; some unclear parts or uneven delivery. (3.6 marks)	Basic presentation; limited explanation or engagement with artefacts . (2.4 marks)	Poor or disorganised explanation; unclear understanding of code. (1.2 marks)	No recording submitted. (0 marks)

Assessment Success Guidance

Deep Understanding and Insight: *Don't just create visuals — interpret them thoroughly. Explain the "why" behind the trends, patterns, or anomalies you discover, and relate these insights back to your research questions and the dataset context.*

Strong Storytelling: *Craft a compelling narrative throughout your report that guides the reader clearly from data preparation to final conclusions. Your storytelling should*

make the data come alive, connecting facts and visuals to form a persuasive and engaging story.

Data-Driven Decision Making: *Formulate insightful, original research questions based on your EDA. Your questions should show critical thinking and relevance to real-world issues reflected in the World Happiness dataset.*

Technical Precision and Clarity: *Write clean, well-documented Python code in your Jupyter Notebook. Use comments to explain your process and choices, enabling reproducibility and demonstrating your programming skills.*

Professional Presentation: *Present your report with clarity, good formatting, and proper citations. Visuals should be clear, correctly labelled, and well-integrated into the narrative. Use colour theory and design principles to make your visualisations both effective and aesthetically pleasing.*

Effective Communication: *In your 10-minute screen recording, clearly explain your analysis and visualisations with confidence and professionalism. This is your opportunity to showcase your understanding and ability to communicate technical work to an audience.*

Assessment Guidance Support and Formative Feedback

You are encouraged to refer to the lecture notes, lab exercises, and any supplementary materials available on Moodle to support the development of your project. These resources are designed to guide you through each stage of the coursework, from data preparation to storytelling and presentation.

Both tutors will be available during the sessions and their scheduled office hours to provide formative feedback and offer necessary support where applicable. You are strongly advised to make use of these opportunities to refine your analysis, visualisations, and overall report quality.

Contact for Queries/ who you can contact for further information or queries

Should you have any questions or require support, please contact the module tutors, *Kimia Aksir* and *Momina Shaheen*. Their contact information can be found at the top of the Moodle page.

Use of Artificial Intelligence (AI)

In this section include details of the use of AI tools to support the assessment.

Please read and apply:

https://roehamptonprod.sharepoint.com/sites/portal/information/LTEU/Documents/4a%20AI%20principles%20and%20guidance%20-for%20Senate.docx

https://roehamptonprod.sharepoint.com/sites/portal/information/LTEU/Documents/4b%20Student%20Guidelines%20on%20the%20use%20of%20AI_.docx

The assessment is designed so that the use of AI during the assessment is possible. You must acknowledge any use of AI and appropriately cite all AI generated outputs.

Please make sure you read and understand the assessment guidelines and ask your Module Leader if you have any questions. You can find the guidance on the use of AI.

Referencing

IEEE style: https://www.citethemrighttutorial.com/course-modules/ieee

Mitigating circumstances/late penalties

Sometimes circumstances outside of your control may affect your studies and might prevent you from submitting work on time or attending an exam.

The University offers the ability for students to request additional time to complete an assessment or to defer an examination to a later date. If you are finding yourself in such a situation, please speak to your Academic Guidance Tutor, the Roehampton Student Union (RSU) or someone in the **Wellbeing team** first, who can support you. Further details can be found on the mitigating circumstances portal.

If you do not apply for or are not approved for Mitigating Circumstances, late penalties will apply. If work is submitted up to 14 days late, the mark will be capped at 40%/50% (delete as appropriate); if it is over 14 days late, it will not be marked.

Resubmissions and Reassessment

If you are required to resubmit this assessment or take part in reassessment, you will be notified via Moodle and your student email. Please ensure you check both regularly. Any reassessment tasks will follow the same learning outcomes and criteria.

Submission Checklist

Before you submit, ask yourself:

Have I fully answered the assessment brief?

Have I met the word count and formatting requirements?

Is my referencing complete and accurate?

Have I declared any AI use honestly?

Have I proofread my work?

Am I submitting through the correct platform before the deadline?