Occupational Certificate: Data Science Practitioner

EXTERNAL INTEGRATED SUMMATIVE ASSESSMENT RUBRIC

Criteria	**Excellent** (4)	**Good** (3)	**Satisfactory** (2)	**Unsatisfactory** (1)
Understanding and Application of Data Science Concepts	Demonstrates comprehensive understanding of core data science concepts. Applies theoretical knowledge to practical problems. Provides clear, concise explanations supported by relevant examples.	Shows solid understanding of most core concepts. Applies theoretical knowledge to practice with minor errors. Explanations are generally clear, with occasional lapses.	Demonstrates basic understanding of core concepts. Application to practice is evident but with noticeable errors. Explanations lack depth but cover key points.	Does not demonstrate understanding of key concepts. Unable to apply theory correctly in practice. Explanations are confusing or incorrect.
Data Analysis and Interpretation	Conducts thorough and accurate data analysis. Interprets results correctly and outlines meaningful insights. Uses appropriate statistical methods and visualisations effectively.	Performs accurate data analysis with minor errors. Provides mostly correct interpretations and insights. Uses suitable statistical methods and visualisations adequately.	Conducts basic data analysis with some errors. Interpretation of results is partially correct. Uses basic statistical methods and visualisations, occasionally inappropriately.	No evidence of proper data analysis. Incorrect or missing interpretations. Ineffective use of statistical methods and visualisations.
Programming and Tool Proficiency	Demonstrates high proficiency in programming languages (e.g., Python, SQL). Efficiently uses data science tools (e.g.,	Shows good proficiency in programming with minor issues. Uses data science tools effectively with occasional errors.	Demonstrates basic programming skills with noticeable issues. Uses data science tools but with frequent errors. Writes functional but	Insufficient programming skills. Inability to use data science tools effectively. Writes code that is non-functional or very poorly documented.

	Pandas, NumPy, scikit-learn). Writes clean, well-documented, and efficient code.	Writes clear and mostly efficient code.	inefficient or poorly documented code.	
Problem-Solving and Critical Thinking	Demonstrates exceptional problem-solving skills. Approaches problems with innovative and effective solutions. Shows high levels of critical thinking and reasoning.	Displays strong problem-solving skills. Finds effective solutions to most problems. Demonstrates good critical thinking and reasoning.	Shows basic problem-solving abilities. Solutions are functional but not innovative. Reasonable levels of critical thinking.	Poor problem-solving abilities. Solutions are largely ineffective. Lacks critical thinking and reasoning.
Communication and Presentation	Communicates ideas clearly and effectively. Presents data and insights in an organised and engaging manner. Uses visual aids (e.g., graphs, charts) appropriately.	Communicates ideas well with minor lapses. Presents data and insights clearly, with minor issues in organisation. Uses visual aids appropriately with occasional issues.	Basic communication of ideas, but occasionally unclear. Presentation lacks some organisation and engagement. Visual aids used, but sometimes ineffectively.	Fails to communicate ideas clearly. Presentation is disorganised and unengaging. Does not use visual aids effectively.