## Assessment type (🗹):

Questioning (Oral/Written)

Practical Demonstration

3rd Party Report

Other – Project/Portfolio (*please specify)*

**Assessment Resources:**

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| Student’s choice of Kaggle or Colab or another Jupiter notebook environment. |

## Assessment Instructions:

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| Example Scenario for Assessment Imagine you work for a mid-sized e-commerce company specializing in environmentally friendly products. The company has experienced significant customer growth and as a result, the customer service department has become overwhelmed with the volume of inquiries received daily via email, social media, and the company website.  The company's leadership is interested in technologies that could improve response times and productivity while maintaining a high level of customer satisfaction. They wish to explore AI, ML, and DL solutions to automate parts of the customer service process.  Your task is to investigate and report on potential AI opportunities that will help manage the increase in customer inquiries more effectively and efficiently.  (optional: In discussion with your lecturer, you may choose to define your own real-world scenario in your workplace or otherwise of some personal interest to you) Instructions: You should complete the following stages as part of your final project:  Task 1: Identify an Opportunity for Task Automation  Task 2: Consider AI, ML, & DL Technologies  Task 3: Assess the Suitability of Each Technique  Task 4: Recommendation and Justification  Task 5: Presentation Submission Evidence: As part of your submission, you must include:  This document containing your responses to Tasks 1, 2, 3, & 4 and the observation checklist completed by your lecturer. |

**Assessment Instrument:**

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| Task 1: Identify an Opportunity for Task AutomationInstructions: Identify a specific task within your organization that could benefit from automation. Describe the task in detail, including the current process, any existing challenges, and the desired outcome from automation. Confirm your ideas with required personnel.  Your response must include the following:  A description of the current work task per organizational policies and procedures.  Details on how the automation aligns with organizational productivity goals.  An overview of any existing technologies or processes related to the task currently used by the workplace.  You must also complete the following observation checklist items:  Student confirmed organisational goals for automating work tasks and improving productivity with required personnel.  Please provide your response here (300-500 words/ 3 Paragraphs): Task 2: Consider AI, ML, & DL TechnologiesInstructions: Research and provide an overview of three different technologies across Artificial Intelligence, Machine Learning, and Deep Learning (one of each).  Determine the suitability of each selected technology to automating the task identified in Task 1.  Each technique should be accompanied by a brief explanation of the technology itself and how it could be applied to the task.  Your response must perform the following:  Identify and research three AI techniques suitable for the automation task.  Research and confirm application procedures for each AI, ML & DL technology.  Please provide your response here (300-500 words/ 1 paragraph for each technology): Task 3: Assess the Suitability of Each TechniqueInstructions: Critically assess the suitability of each AI technique mentioned in Task 2. Consider how each technique can meet the desired outcomes, as well as any potential technical limitations or challenges of the approach. Ensure you identify any potential risks or adverse outcomes that could be associated with the technique.  Your response should contain:  Analysis of the application procedure for the three AI technologies.  A documentation of the advantages and disadvantages of each AI technique.  Documentation of identified implementation risks for each AI technique.  You must also complete the following observation checklist items:  Student discussed implementation risks for AI, ML and DL technologies with required personnel.  Please provide your response here (300-500 words/3 Paragraphs): Task 4: Recommendation and JustificationInstructions: Based on your assessments in Task 3, choose the AI technique you believe to be the most suitable candidate for automating the identified task. Clearly justify your choice and put together a brief proposal for implementing this solution within your organization.  Your response should contain:  The final submission of your AI implementation proposal to required personnel.  You must also complete the following observation checklist items:  Student discussed proposed application with supervisor (lecturer) and received feedback.  Outline the key points of your proposal here (500 words): Task 5: PresentationInstructions: Prepare a presentation summarizing your findings from Tasks 1-4, highlighting the key aspects of your recommendation and the rationale behind your chosen solution. Present this summary to your peers and address any questions they may have.  You must complete the following observation checklist items:  Student incorporated relevant feedback into final presentation.  Student presented an opportunity to the class to apply AI, ML, & DL technologies in the workplace. |

## Observation Checklist

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| Checkpoint | Done (yes/no) | Feedback (if needed) | S/NYS |
| Student confirmed organisational goals for automating work tasks and improving productivity with required personnel |  |  |  |
| Student discussed implementation risks for AI, ML and DL technologies with required personnel |  |  |  |
| Student discussed proposed application with supervisor (lecturer) and received feedback. |  |  |  |
| Student incorporated relevant feedback into final presentation. |  |  |  |
| Student presented an opportunity to the class to apply AI, ML, & DL technologies in the workplace. |  |  |  |
| Student Submitted final recommendations to required personnel. |  |  |  |