# Assessment Mapping Matrix

* Ensure mapping to the specific (numbered) questions, tasks or instructions that have been set in your assessments.
* Changes to this assessment must be completed in conjunction with this document.
* This mapping document includes (in red) terms used in the new Streamlined Training Packages.
* Add additional rows as required.

| Assessment Number | Assessment Task 1 | Assessment Task 2 | Assessment Task 3 | Assessment Task 4 |
| --- | --- | --- | --- | --- |
| Assessment Title | AT1 Identify Opportunities for AI Task Automation | AT4 Apply Machine Learning to Task Automation | AT2 Knowledge-Based Assessment - Understanding AI, ML, and DL (Weeks 1–6) | AT3 Knowledge-Based Assessment - Understanding AI, ML, and DL (Weeks 8-13) |
| **Elements and Performance Criteria** |  |  |  |  |
| Element 1 |  |  |  |  |
| 1.1 Confirm ML work brief and tasks according to organisational policies and procedures | 1 |  |  |  |
| 1.2 Compare structured, unstructured, labelled and unlabelled machine training data according to work brief | 1 |  |  |  |
| 1.3 Randomise, deduplicate and check machine training data for imbalances and biases | 1 |  |  |  |
| 1.4 Analyse unbiased and biased dataset considerations according to work brief | 2 |  |  |  |
| 1.5 Divide data into training subset and evaluation subset according to work brief |  |  |  |  |
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| **Element 2** |  |  |  |  |
| 2.1 Confirm that data is correctly grouped as labelled or unlabelled | 2 |  |  |  |
| 2.2 Analyse regression algorithms, decision trees or neural net algorithms for labelled data, where required | 3 |  |  |  |
| 2.3 Analyse clustering, association, instance-based or neural network algorithms for unlabelled data, where required | 3 |  |  |  |
| 2.4 Document analysis findings according to organisational policies and procedures | 5 |  |  |  |
| 2.5 Select algorithm for dataset according to analysis findings |  |  |  |  |
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| **Element 3** |  |  |  |  |
| 3.1 Confirm expected ML outputs with required personnel | 4 |  |  |  |
| 3.2 Run variables through selected algorithm according to work brief | 5 |  |  |  |
| 3.3 Compare expected and actual ML outputs | 5 |  |  |  |
| 3.4 Adjust algorithm and re-run variables through selected algorithm according to work brief |  |  |  |  |
| 3.5 Confirm that new algorithm outputs yield accurate output results |  |  |  |  |
| 3.6 Compare expected and final outputs with required personnel |  |  |  |  |
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| **Element 4** |  |  |  |  |
| 4.1 Configure ML model into existing systems according to organisational policies and procedures |  |  |  |  |
| 4.2 Run organisational data through algorithm according to work brief |  |  |  |  |
| 4.3 Secure and save ML model according to organisational policies and procedures |  |  |  |  |
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| **Element 5** |  |  |  |  |
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| **Required Knowledge or Knowledge Evidence** |  |  |  |  |
| **tasks and processes commonly automated in similar organisations, including:**  creating and managing email campaigns  using chatbots and automated messaging platforms  analysing trends within datasets  hiring and recruitment  employee help desk support services  generating customer support logs and tickets | 2, 3, 4 |  |  |  |
| **common organisational processes and technologies where ML principles can be applied to improve productivity** |  |  |  |  |
| **industry-recognised ML principles and techniques** | 3 |  |  |  |
| **functions and features of machine training datasets in relation to automating work tasks** | 3 |  |  |  |
| **characteristics and functions of structured, unstructured, labelled and unlabelled data** | 1, 2, 3, 4, 5 |  |  |  |
| **characteristics of unbiased and biased datasets** | 1, 2, 3, 4 |  |  |  |
| **processes for generating randomised, deduplicated and unbiased data** |  |  |  |  |
| **differences between training subsets and evaluation subsets** |  |  |  |  |
| **key algorithms used to run labelled data, including:**  regression algorithms  decision trees  instance-based algorithms  neural network algorithms |  |  |  |  |
| **key algorithms used to run unlabelled data, including:**  clustering algorithms  association algorithms  neural network algorithms |  |  |  |  |
| **processes for operating and running variables through algorithms** |  |  |  |  |
| **characteristics of semi-supervised, supervised, unsupervised and reinforcement learning** |  |  |  |  |
| **basic functions and operations of common programming languages for algorithms** |  |  |  |  |
| **characteristics of key logic in algorithms** |  |  |  |  |
| **method to compare expected and actual ML outputs** |  |  |  |  |
| **secure and safe practices to develop ML models in organisational contexts** |  |  |  |  |
| **key methods to determine ML deployment requirements for end users, including:**  cross-industry standard process for data mining (CRISP-DM) methodology  software development methodology |  |  |  |  |
| **organisational policies and procedures, legislative requirements and frameworks relating to work tasks, including:**  behavioural science  data governance  ethics  human rights  Australia’s Artificial Intelligence Ethics Framework. |  |  |  |  |
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| **Required Skills or Performance Evidence** |  |  |  |  |
| **The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:** |  |  |  |  |
| develop at least one machine learning (ML) model to automate organisational work task |  |  |  |  |
| use an algorithm to produce variable outputs on at least two occasions. |  |  |  |  |
| **In the course of the above, the candidate must:** |  |  |  |  |
| adapt ML principles and techniques to suit specific organisational problems |  |  |  |  |
| apply required organisational policies and procedures. |  |  |  |  |
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| **Critical Aspects of Evidence (if relevant)** |  |  |  |  |
| NA |  |  |  |  |
| **Range Statement or Range of Conditions ’musts’** |  |  |  |  |
| NA |  |  |  |  |
| **Assessment Conditions ‘musts’** |  |  |  |  |
| Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry. | Skills in this unit are demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry. This includes access to: organisational processes and technologies where ML principles can be applied to improve productivity work brief, organisational policies and procedures, legislative requirements and frameworks required to demonstrate the performance evidence. Assessors of this unit always satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. | | | |
| **This includes access to:** |
| organisational processes and technologies where ML principles can be applied to improve productivity |
| work brief, organisational policies and procedures, legislative requirements and frameworks required to demonstrate the performance evidence. |
| Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |
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Have Foundation Skills been considered in the development of the assessment tools? YES / NO

Does this mapping include all assessments listed in the Assessment Timetable of the **Training and Assessment Plan** (**TAS**)? YES/NO