# 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 work brief and tasks according to organisational policies and procedures | 1 |  |  |  |
| 1.2 Analyse ML requirements according to cross-industry standard process for data mining (CRISP-DM) methodology, where required | 1 |  |  |  |
| 1.3 Confirm input machine training data source according to work brief | 1 |  |  |  |
| 1.4 Confirm that data attribute names contain target according to work brief | 2 |  |  |  |
| 1.5 Review data transformation instructions according to work brief |  |  |  |  |
| 1.6 Confirm that default and non-default training parameters control required learning algorithm according to work brief |  |  |  |  |
| **Element 2** |  |  |  |  |
| 2.1 Set machine training data parameters according to work brief | 2 |  |  |  |
| 2.2 Select model size according to work brief | 3 |  |  |  |
| 2.3 Use selected parameter and feature engineering on required training data | 3 |  |  |  |
| 2.4 Finalise machine training data procedures according to work brief | 5 |  |  |  |
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| **Element 3** |  |  |  |  |
| 3.1 Set validation data parameters according to work brief | 4 |  |  |  |
| 3.2 Select model size according to work brief | 5 |  |  |  |
| 3.3 Use selected parameter and feature engineering on required validation data | 5 |  |  |  |
| 3.4 Identify any functionality issues of parameters |  |  |  |  |
| 3.5 Refine ML parameters according to work brief |  |  |  |  |
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| **Element 4** |  |  |  |  |
| 4.1 Set test data parameters according to work brief |  |  |  |  |
| 4.2 Select model size according to work brief |  |  |  |  |
| 4.3 Use selected parameter and feature engineering on required test data |  |  |  |  |
| 4.4 Identify and rectify any functionality issues in test dataset |  |  |  |  |
| 4.5 Finalise test data procedures according to work brief |  |  |  |  |
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| **Element 5** |  |  |  |  |
| 5.1 Review target data outputs according to work brief |  |  |  |  |
| 5.2 Adjust model based on any discrepancies of outputs, where required |  |  |  |  |
| 5.3 Record predictive accuracy of ML model according to work brief |  |  |  |  |
| 5.4 Run variables through ML model and record outputs |  |  |  |  |
| 5.5 Compare outputs returned by ML model against target data outputs |  |  |  |  |
| 5.6 Document metrics and accuracy of ML data predictions according to organisational policies and procedures |  |  |  |  |
|  |  |  |  |  |
| **Required Knowledge or Knowledge Evidence** |  |  |  |  |
| **key features and functions of supervised and unsupervised ML techniques** | 2, 3, 4 |  |  |  |
| **key features and functions of ML, including:**  data sources  training, validation and test data  attribute names  target data  default and non-default parameters  feature engineering  learning algorithms  model sizes  metrics |  |  |  |  |
| **procedures for training, testing and validating data parameters** | 3 |  |  |  |
| **key methods to determine ML deployment requirements for end users, including:**  cross-industry standard process for data mining (CRISP-DM) methodology  software development methodology | 3 |  |  |  |
| **method to determine predictive accuracy of ML models using target data** | 1, 2, 3, 4, 5 |  |  |  |
| **method to compare predictions returned by ML models against known target values** | 1, 2, 3, 4 |  |  |  |
| **key features and functions of industry-recognised ML models that may be trained and evaluated** |  |  |  |  |
| **organisational formats used for documenting ML model evaluations** |  |  |  |  |
| **organisational policies and procedures, and legislative requirements relating to work tasks.** |  |  |  |  |
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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:** |  |  |  |  |
| **train at least one machine learning (ML) model, where the work must include one of the following:**  training using unsupervised ML techniques  training using supervised ML techniques |  |  |  |  |
| **evaluate the operations of at least one the above trained ML models, where the evaluation must include one of the following:**  unsupervised ML techniques  supervised ML techniques. |  |  |  |  |
| **In the course of the above, the candidate must:** |  |  |  |  |
| produce documentation of all performed work tasks in required organisational formats |  |  |  |  |
| 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: industry-recognised ML models that may be trained and evaluated software in which ML models can be trained, validated, tested and evaluated work brief and organisational policies and procedures 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:** |
| industry-recognised ML models that may be trained and evaluated |
| software in which ML models can be trained, validated, tested and evaluated |
| work brief and organisational policies and procedures 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. |

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