Accelerate People

Qualification Specification

Accelerate People L6 EPA for Machine Learning Engineer ST1398/V1.0

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Version History		
Version	Date Amended	Changes Made
1	March 2025	Document created.
1.1	May 2025	Document updated to remove portfolio requirement from AM2.

Accelerate People

Contents

Qualification Objective

The level 6 Machine Learning Engineer apprenticeship is one of a suite of apprenticeships that have been designed by industry employers to meet a range of job roles across different industries and sizes of business.

Accelerate People are an end-point assessment organisation (EPAO) for apprenticeship standards that are defined by the Institute for Apprenticeships & Technical Education (IfATE). The apprenticeship standard and assessment plan can be found on the IfATE website.

As part of this apprenticeship, all apprentices are required to complete an independent end-point assessment (EPA). The purpose of the EPA is to independently assess that any apprentice on this standard is competent in a relevant job role and can evidence meeting all the assessment criteria relating to the knowledge, skills and behaviours (KSB) outcomes.

The Level 6 Machine Learning Engineer Apprenticeship

Role Profile

This occupation is found in a wide range of public and private sector organisations who increasingly work with machine learning (ML) systems and AI automation that can serve all industries and sectors such as agriculture, environmental and animal care, business and administration, care services, catering and hospitality, construction and the built environment, creative & design, digital, education, engineering & manufacturing, health and science, legal, finance and accounting, protective services, sales, marketing and procurement, transport and logistics.

ML Engineers gather data from different sources to design, build, deploy and validate machine learning and or artificial intelligence solutions. They ensure that data is sourced responsibly and analysed to a high standard, aligning the use of ML solutions with the organisations business goals. They build ML models in an innovative, safe and sustainable way, selecting features that will help the model learn effectively by using the right algorithm for the task. Once the ML model is trained, they evaluate its performance and deploy it into the live environment. They streamline the process of taking ML models into production, and then maintain and monitor them. Continuous

monitoring is essential to maintain the ML models accuracy. They manage the lifecycle of ML systems & models from initial deployment, to testing and updating of the next iteration, using industry best practice and frameworks to ensure fast, simple and reliable ML pipelines. They would identify as AI professionals, conversant in operating in settings of technical complexity and uncertainty. They can interface effectively across the organisation to communicate the correctness of their engineered technical solutions.

A ML engineer will work with a variety of professionals who work together to facilitate the successful development, deployment and adoption of ML systems and models, working with minimal supervision, ensuring they are meeting deadlines and interacting with Data Scientists for analytical guidance, Data Engineers for data preparation, Software Engineers for integration, Product Managers for product strategy, QA Engineers for testing, DevOps Engineers for deployment, UI/UX Designers for user interface design, Business Analysts for requirement analysis and stakeholders or clients for feedback and updates. They typically report to either the Senior ML Operations Engineer, Product Manager ML, AI Specialist, AI Engineering Manager or Client.

A ML engineer will provide clear technical support communicating complex information to stakeholders and across the organisation inputting into systems documentation, with details around risks and potential mitigation actions in line with the correct organisational standards. They are responsible for meeting quality requirements and working in accordance with health and safety and environmental considerations. They will work according to organisational procedures and policies, to maintain security and compliance and be responsible for ensuring compliance with data governance, ethics, environmental, sustainability and security policies.

Typical Job Titles:

Ai engineer, big data engineer, machine learning engineer, machine learning operations engineer.

Duties:

This apprenticeship standard includes duties to support alignment between the job role and the apprenticeship standard. Listed below are the duties that all apprentices must demonstrate in their apprenticeship. These duties are not assessed or graded as part of the EPA.

Duty 1: Ensure that machine learning and artificial intelligence engineered solutions are implemented in a safe, trusted and responsible manner.

Duty 2: Plan the engineering development of machine learning applications and frameworks.

Duty 3: Develop, test, stage and build in a pre-production environment, prototyping machine learning products and solutions including experiment and tracking.

Duty 4: Monitor and support machine learning models through operational deployment in the live environment.

Duty 5: Monitor the operating resource implications of machine learning systems within the agreed parameters for the service. Develop scalable and environmentally sustainable systems.

Duty 6: Deliver responsive technical engineering support services; to mitigate operational impact whilst ensuring business continuity.

Duty 7: Develop and maintain collaborative stakeholder relationships to ensure buy-in; and provide development updates and auditable records of project and stakeholder expectations at each decision point. Stakeholders can include clients, senior members of staff, Senior ML Operations Engineer, Product Manager, ML and or AI Specialist or AI Engineering Manager.

Duty 8: Ensure compliance with data governance, ethics and cyber security.

Duty 9: Keep up to date with technological engineering developments in machine learning data science, data engineering and artificial intelligence to advance own skills and knowledge.

Entry Requirements

Qualifications

Apprentices aged 16-18 on their apprenticeship start date, without level 2 English and maths, will need to achieve this level prior to taking the EPA. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Apprentices aged 19+ on their apprenticeship start date, without level 2 English and maths, are exempt from achieving this prior to taking their EPA; this exemption is by prior agreement between the apprentice and employer.

Experience

There are no pre-requisite knowledge, skills or understanding requirements defined for entry onto this qualification.

EPA Requirements

To successfully complete the level 6 Machine Learning Engineer apprenticeship, apprentices must achieve at least a pass in both EPA assessment methods. This EPA consists of two discrete assessment methods which have the following grades awarded.

Assessment Method 1 (AM1): Project evaluation report, presentation and questioning.

- Fail.
- Pass.
- Distinction.

Assessment Method 2 (AM2): Professional discussion.

- Fail.
- Pass.
- Distinction.

Failed assessment methods must be re-sat or re-taken within a six-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.

EPA Gateway

For this apprenticeship all apprentices must spend a minimum of 12 months on programme, of which a minimum of 20% must be spent undertaking off-the-job training, before being eligible to undertake the EPA.

Before starting the EPA, an apprentice must meet the following gateway requirements:

- The apprentice's employer must confirm that they think their apprentice is working at or above the occupational standard. The apprentice will then enter the gateway. The employer may take advice from the apprentice's training provider(s), but the employer must make the decision.
- Apprentices must have achieved English and Maths qualifications in line with the apprenticeship funding rules.

Apprentices may request additional time if they require a reasonable adjustment. Information on how and when to apply is contained within the reasonable adjustments policy.

Once the apprentice is ready to enter gateway the following must be submitted to progress:

- Gateway form:
  - Confirming any dates the apprentice is unavailable during the EPA period.
  - Advising Accelerate People if the apprentice requires any reasonable adjustments to be made during the EPA.
  - Confirmation signatures that the apprentice is ready for the EPA.
  - For the project evaluation report, presentation and questioning, the apprentice must submit a project scoping document which contains the project's title, summary and scope.
- Evidence of:
  - Maths and English qualifications at Level 2 or above (or acceptable equivalent as specified in the entry requirements section), **or**
  - Confirmation that the apprentice is exempt from achieving English and Maths qualifications.

The gateway form along with all documentation must be uploaded before the EPA can commence. Failure to upload any of the required documentation may delay the EPA start date.

Knowledge, Skills and Behaviours

There are no mandatory vendor qualifications or knowledge modules for this apprenticeship. Apprentices are expected to be able to demonstrate competence against the assessment criteria specified within the assessment plan. The assessment criteria are based on the following KSBs, which apprentices are expected to be competent in before entering gateway.

Knowledge

K1: The purpose, methodologies and applications for ML AI solutions such as Machine Learning, Computer (Machine) Vision, batched learning systems, Robotics, Generative Transformer Models and Natural & Large Language Processing (NLP and LLMs) Models.

K2: The stages of the machine learning lifecycle. Including establishing the model objectives, data preparation, building and training the model, ML problem framing, testing and evaluating the model using the preferred framework, deploying the modelling and monitoring, maintaining and updating the model using process frameworks such as Quality Assurance and either online, continuous (CLS) or batched learning systems.

K3: Vulnerabilities related to confidentiality, authentication, non-repudiation, service integrity, network security, planned or unplanned adversarial danger, threat or attack, host OS security, physical security and the implications and preventative mitigations for these at all stages of the machine learning lifecycle.

K4: Project Management methodologies and techniques for machine learning activities such as CRISP-ML Cross Industry Standard Process.

K5: Differences and applications of machine learning methods, and models such as: supervised learning; semi supervised learning; unsupervised learning; natural language processing; reinforcement learning; ensemble learning; predictive using tools for experiment tracking, orchestration, versioning, deployment and monitoring.

K6: The risks that might occur for example bias, security, quality or over fitting in the product lifecycle during building, testing and through to deployment of ML models in the live environment.

K7: How to identify and select the performance metrics of the proposed model in the context of the business need.

K8: The processes used to identify variables and features that can impact stability of model performance during testing and when applying changes to existing models in the live environment.

K9: The importance of feature engineering, selection and pre-processing in effective machine learning.

K10: Machine learning implementation principles for data engineering solutions including quality, security, efficiency, validity, training, testing and tuning.

K11: How machine learning methods are applied to maximise the impact to the organisation.

K12: Deployment approaches for new data pipelines and automated processes.

K13: Data and information security standards, ethical practices, policies and procedures relevant to data management activities such as data lineage, data retention and metadata management.

K14: Change management processes for ML solutions; recording and logging change using appropriate tools and documentation.

K15: The implications of data types (for example variety, quality, formats) on security, scalability, governance for ML and or AI infrastructure, and cost of local, remote or distributed solutions such as cloud and other SaaS and PasS ML/AI providers.

K16: How to use programming languages, integrated development environments and modern machine learning libraries.

K17: Principles for engineering environmental sustainable ML solutions, that support organisational strategies and objectives for environmental sustainability.

K18: The relationship between mathematical principles and core techniques in machine learning and data science within the organisational context.

K19: How to solve problems and evaluate software solutions via analysis of test data including synthetic data and results from research, feasibility, acceptance and usability testing.

K20: Sources of error and algorithmic bias, including how they may be affected by choice of dataset and methodologies applied using practices such as Explicability and Explainable AI (XAI).

K21: The methods and techniques used to communicate concepts and messages to meet the needs of the audience, adapting communication techniques accordingly.

K22: Approaches and strategies to stakeholder engagement including engagement with the end user.

K23: How machine learning and data science techniques support and enhance the work of other members of the team.

K24: Concepts of data governance, including regulatory requirements, data privacy, security, trustworthiness and quality control.

K25: Legislation, regulation, governance and guidance assurance frameworks for example AREA or SAFE D and their application to the safe interoperable use of data, machine learning and artificial intelligence.

K26: The ethical aspects associated with the use and collation of data and machine learning models.

K27: What the cyber security culture in an organisation is, and how it may contribute to security risk.

K28: How to identify trends and emerging technologies to ensure knowledge is up to date with new developments in machine learning and AI such as AI embedded within tooling.

K29: How own role supports ML solutions in accordance with organisational strategies, business requirements, Corporate Governance Principles, Social Corporate Responsibilities, legal regulations and Ethical Practices.

K30: AI based approaches, including those provided by third-party vendors' (Application Programming Interfaces), into existing and new processes.

K31: Software development best practices; for example, software testing, version control, continuous integration and continuous delivery.

Skills

S1: Assess vulnerabilities of the proposed design, to ensure that security considerations are built in from inception and throughout the development process.

S2: Translate business needs and technical problems to scope machine learning engineering solutions.

S3: Select and engineer data sets, algorithms and modelling techniques required to develop the machine learning solution.

S4: Apply methodologies and project management techniques for the machine learning activities.

S5: Create and deploy models to produce machine learning solutions.

S6: Document the creation, operation and lifecycle management of assets during the model lifecycle.

S7: Apply techniques for output model testing and tuning to assess accuracy, fit, validity and robustness.

S8: Assess system vulnerabilities and mitigate the threats or risks to assets, data and cyber security.

S9: Refine or re-engineer the model to improve solution performance.

S10: Apply techniques for monitoring models in the live environment to check they remain fit for purpose and stable.

S11: Consider the associated regulatory, legal, ethical and governance issues when evaluating choices at each stage of the data process.

S12: Apply machine learning and data science techniques to solve complex business problems.

S13: Track and test continual learning models.

S14: Analyse test data, interpret results and evaluate the suitability of proposed solutions both new and inherited models, considering current and future business requirements.

S15: Identify, consider and advocate for ML solutions to deliver an environmental and operational sustainable outcome.

S16: Transition prototypes into the live environment.

S17: Complete audit activities in compliance with policies, governance, industry regulation and standards.

S18: Consider the risks with using digital and physical supply chains.

S19: Ensure the model capacity is scaled in proportion to the operating requirements.

S20: Support the evaluation and validation of machine learning models and statistical evidence to minimise algorithmic bias being introduced.

S21: Monitor data curation and data quality controls including for synthetic data.

S22: Identify and select the machine learning or artificial intelligence platform architecture and specific hardware, to contribute to solving a computational problem using allocated resources.

S23: Identify and embed changes in work to deliver sustainable outcomes.

S24: Monitor model data drift, using performance metrics to ensure systems are robust when moving outside of their domain of applicability.

S25: Develop a process to decommission assets in line with policy and procedures. Manage current and legacy models in line with industry approaches.

S26: Undertake independent, impartial decision-making respecting the opinions and views of others in complex, unpredictable and changing circumstances.

S27: Coordinate, negotiate with and manage expectations of diverse stakeholders suppliers and multi-disciplinary teams with conflicting priorities, interests and timescales.

S28: Produce and maintain technical documentation explaining the data product, that meets organisational, technical and non-technical user requirements, retaining critical information.

S29: Create and disseminate reports, presentations and other documentation that details the model development to confirm stakeholder approval for handover to implementation.

S30: Comply with equality, diversity, and inclusion policies and procedures in the workplace.

S31: Horizon scan to identify new technological developments that offer increased performance of data products.

S32: Apply Machine Learning principles and standards such as, organisational policies, procedures or professional body requirements.

S33: Integrate AI-based approaches, including those provided by third-party vendors' Application Programming Interfaces, into existing and new processes.

S34: Proactive identification of the potential for automation for example through AI solutions embedded within tooling.

Behaviours

B1: Uses initiative and innovation concerning new and emerging technologies through self-directed learning and horizon scanning.

B2: Takes personal responsibility and prioritises sustainable outcomes in how they carry out the duties of their role.

B3: Acts inclusively when collaborating with people from technical and non-technical backgrounds. Contributing to knowledge sharing, management and empowerment across the broader team.

B4: Acts with integrity, giving due regard to legal, ethical and regulatory requirements.

B5: Operates in settings of technical complexity and uncertainty.

Assessment

AM1: Project Evaluation Report, Presentation and Questioning

The project assessment method involves the apprentice completing a significant and defined piece of work that has a real business application and benefit. This process may include for example, research, analysis and the completion of tasks or activities to achieve the outcome. The assessment method will have an output at the end of the defined piece of work. The work completed for the project assessment method must meet the needs of the employer's business and be relevant to the apprentice's occupation and apprenticeship. This assessment method has two components:

- Completion of the defined piece of work for the project with a project output.
- A presentation with questions and answers.

Together, these components give the apprentice the opportunity to demonstrate the assessment criteria and KSBs mapped to this assessment method. They are assessed by an independent assessor.

The employer should ensure the apprentice has the time and resources, within the project period, to plan and complete their project.

The apprentice must complete a project based on any of the following:

- A specific problem.
- A recurring issue.
- An idea or opportunity.

Examples of the types of project an apprentice could submit include:

- Scaling of an existing system or process.
- Making improvements to a current system.
- Enhancing organisational capability.
- Improvements to enhance environmental sustainability.

The list above is not exhaustive.

Component One: Project Report

The project report will typically have a word count of 5,000 words. A tolerance of 10% above or below is allowed at the apprentice's discretion. Appendices, references and diagrams are not included in this total. The apprentice must produce and include a mapping in an appendix, showing how the report evidences the KSBs mapped to this assessment method.

To ensure the project report is robust and sufficiently covers the KSBs, it must include:

- An executive summary (or abstract).
- An introduction.
- The scope of the project (including key performance indicators, aims and objectives).
- A project plan.
- Research outcomes.
- Data analysis outcomes.
- Project outcomes.
- Discussion of findings.
- Recommendations and conclusions.
- References.
- Appendix containing mapping of KSBs to the report.

The report must also include:

- Why a specific model was deployed for a certain data set.
- How the apprentice overcame challenge and made improvements as a result.
- How data bias was handled.

The apprentice must complete and submit the report and any presentation materials to the EPAO by the end of week eight of the EPA period.

Component Two: Presentation with Questions

The presentation with questions will be structured to give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

The apprentice must prepare and deliver a presentation to an independent assessor. After the presentation, the independent assessor will ask the apprentice questions about their project report and presentation.

The presentation should cover the following:

- An overview of the project.
- The project scope (including key performance indicators).
- Summary of actions undertaken by the apprentice.
- Project outcomes and how these were achieved.
- How the apprentice overcame any challenges.

The apprentice must submit any presentation materials to the EPAO at the same time as the report - by the end of week eight of the EPA period.

Key points:

- Presentation with questions will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.
- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the presentation with questions will be cancelled.
- Apprentices are required to outline details of visual aids to be used and specify any equipment required for the presentation.
- The presentation with questions will last for 50 minutes, the presentation will last 20 minutes, and the questioning will last for 30 minutes. The independent assessor can increase the time of the presentation and questioning by up to 10%.
- The apprentice may choose to end the assessment method early; they must be confident they have demonstrated competence against the assessment requirements for the assessment method. The assessor cannot suggest or choose to end any assessment methods early (unless there is a safeguarding issue) but may suggest the assessment continues if the apprentice requests to finish early.
- A minimum of six questions will be asked based on both project report and the presentation and will be formed based on the evidence and grading requirements in the table below.
- Apprentices are allowed access to their project report and presentation throughout the questioning.
- Questions will only be based on the evidence submitted for this assessment method.
- Apprentices will have two weeks' notice of the presentation with questions date.

AM2: Professional Discussion

Professional Discussion

In the professional discussion, an independent assessor and apprentice have a formal two-way conversation. It gives the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method.

The following topics will be covered in the professional discussion:

- Model scoping.
- Experiment and tracking.
- Model deployment.
- Collaborative working.
- Sustainability.
- Engineering principles.
- Model testing and improvement.
- Model management.
- Compliance and assurance.
- Collaborative working.
- Continuous professional development.

The professional discussion will take place at least two weeks after the gateway has been confirmed.

- The professional discussion will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam for the entire duration.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.
- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the professional discussion will be cancelled.
- The professional discussion will last for 90 minutes with the independent assessor having the discretion to increase the time of the questioning by up to 10%.
- The apprentice may choose to end the assessment method early; they must be confident they have demonstrated competence against the assessment requirements for the assessment method. The assessor cannot suggest or choose to end any assessment methods early (unless there is a safeguarding issue) but may suggest the assessment continues if the apprentice requests to finish early.

- A minimum of six questions will be asked and will be formed based on the evidence and grading requirements in the table below.

Assessment Criteria

AM1: Project Evaluation Report, Presentation and Questioning

Themes and KSBs	Pass Criteria	Distinction Criteria
Model Scoping K2, K3, K6, K7, S2, S4, S21	Outlines the stages of the machine learning lifecycle. (K2) Explains their use of performance metrics when scoping machine learning engineering solutions by translating business needs and technical problems. (K7, S2) Explains how they apply project management methodologies and techniques for the machine learning activities. (S4) Describes the risks of deploying new methods and models and how they assess system vulnerabilities, mitigating the threats or risks to assets and data bias. (K3, K6, S21)	Evaluates the impact of performance metrics on scoping machine learning engineering solutions when meeting business needs and technical problems. (K7, S2)
Experiment and Tracking K8, K9, K10, K12, K16, S3, S5, S7	Explains how they select and engineer techniques to develop the machine learning solution and the processes used to identify variables and features that can impact stability of model performance during testing and when	Critically evaluates how their application of techniques ensures the validity and robustness of machine learning. (K10, S7)

Themes and KSBs	Pass Criteria	Distinction Criteria
	applying changes to existing models in the live environment. (K8, S3) Explains feature engineering, selection and pre-processing and their importance in effective machine learning. (K9) Describes deployment approaches for new data pipelines and automated processes and how they create and deploy models to produce machine learning solutions. (K12, S5) Explains how programming languages, integrated development environments and modern machine learning libraries are used. (K16) Explains the techniques applied for output model testing and tuning in order to access accuracy, fit, validity and robustness. (K10, S7)	
Model Deployment K13, K31, S8, S10, S13, S14, S16, S20	Outlines the data and information security standard, ethical practices, policies and procedures relevant to data management. (K13) Explains how they track, test and monitor continual learning models in to the live environment, ensuring that they remain fit for purpose and stable. (S10, S13, S14)	Justify how validation of machine learning models minimised bias and the impact this has on prototypes in the live environment. (S16, S20)

Themes and KSBs	Pass Criteria	Distinction Criteria
	Explains how they transition prototypes into the live environment. (S16) How they assess system vulnerabilities and mitigate the threats or risks to assets, data and cyber security. (S8) Explains how they support the evaluation and validation of machine learning models and statistical evidence to minimise algorithmic bias being introduced using their knowledge of software development best practices. (K31, S20)	
Collaborative Working K22, K23, S28, S29	Explains how they create and use reports, presentations and other documentation on the model development to confirm stakeholder and end user engagement and approval for handover implementation. (K22, S29) Explains how they produce and maintain technical documentation using their knowledge of machine learning and data science techniques to enhance the work of other members of the team and meet technical and non-technical user requirements. (K23, S28)	None.
Sustainability K17, S15, S23, B2	Explains how they take responsibility for identifying, advocating and embedding ML solutions to deliver environmental and operational sustainable outcomes by considering principles that	None.

Themes and KSBs	Pass Criteria	Distinction Criteria
	support organisational strategies and objectives for environmental sustainability. (K17, S15, S23, B2)	

AM2: Professional Discussion

Themes and KSBs	Pass Criteria	Distinction Criteria
Engineering Principles K1, K5, K18, K20, K30, S33, S34	Explains the purpose, methodologies and applications for machine learning and AI solutions. (K1) Outlines the differences and applications of machine learning methods and models. (K5) Describes the relationship between mathematical principles and core techniques in machine learning and data science within the organisational context. (K18) Explains the sources of error and algorithmic bias and how they may be affected by choice of dataset and methodologies applied using practices. (K20) Explains how they integrate AI based approaches into existing new processes and how they proactively identify the potential for automation. (K30, S33, S34)	None.
Model Testing and Improvement K4, K14, K19, K25, S1, S9, S11, S12, B5	Articulates how they assess vulnerabilities to ensure security considerations throughout the development	Critically evaluates why they refine the model to improve solution performance. (S9, K14)

Themes and KSBs	Pass Criteria	Distinction Criteria
	process and outlines the implications associated throughout at all stages of the machine learning lifecycle. (K4, S1) Explains how they evaluate choices at each stage of the data process, taking the associated regulatory legal, ethical, governance and quality control issues into consideration. (S11, K25) Summarises how they operate in settings of technical complexity and uncertainty to evaluate software solutions and apply machine learning and data science techniques to solve complex business problems. (K19, S12, B5) Outlines how they refine or re-engineer the model to improve solution performance whilst recording, logging and managing change using appropriate tools and documentation. (K14, S9)	
Model Management K11, K15, S6, S17, S18, S19, S22, S24, S25	Explains how they identify and select platform architecture and hardware and apply machine learning methods to contribute to solving a computational problem and maximise the impact to the organisation. (K11, S22) Outlines the implications of data types on security and scalability and the cost of local, remote or distributed solutions and how they consider the	Justifies how their consideration of risk and implications has impacted on the security and scalability of machine learning and AI infrastructure. (K15, S19) Evaluates how systems are robust as a result of monitoring of data curation and controlling quality and performance of metrics. (S22, S24)

Themes and KSBs	Pass Criteria	Distinction Criteria
	risks with using digital and physical supply chains. (K15, S18, S19) Explains how they monitor model drift, data drift and performance metrics to ensure that systems are robust when moving outside of their domain of applicability. (S24) Explains how they have developed a process to decommission assets and manage current and legacy models in line with policy and procedures. (S25) Explains how they work in compliance with policies, governance, industry regulation and standards to complete audit activities whilst documenting the creation and operation and management of assets during the model lifecycle. (S6, S17)	
Compliance and Assurance K24, K26, K27, S32, B4	Explains the cyber security culture in an organisation and how it may contribute to security risk for Machine Learning solutions. (K27) Explains how they apply machine learning principles, standards and assurance frameworks to ensure the safe interoperable use of data, machine learning and artificial intelligence. (K25, S32) Explains how they act with integrity in relation to the ethical aspects associated with	None.

Themes and KSBs	Pass Criteria	Distinction Criteria
	the use of data and machine learning models, giving regard to legal, ethical and regulatory requirements. (K26, B4, K24)	
Collaborative Working K21, K29, S26, S27, S30, B3	Explains how they use strategies to engage with a diverse range of stakeholders, suppliers and multi-disciplinary teams to co-ordinate, negotiate and manage expectations and deal with conflicting priorities, interest and timescales. (K21, S27) Describes how they acts inclusively when collaborating with people from technical and non-technical backgrounds, contributing to knowledge sharing, management and empowerment across the broader team, whilst complying with equality, diversity and inclusion policies and procedures. (S30, B3) Outlines how their own role supports the organisations strategy and objectives and how they work in unpredictable and changing circumstances to make impartial decisions whilst respecting the opinions and views of others. (K29, S26)	Justifies their strategies when working with stakeholders and how this positively impacts on the organisation. (S27)
Continuous Professional Development K28, S31, B1	Explains how they use their initiative to identify new emerging technological developments and trends to ensure knowledge of machine learning and AI is up to date. (K28, S31, B1)	None.

Grading

Each assessment method is graded individually and combined to give an overall grade. Assessment criteria do not appear in more than one assessment method, therefore assessment criteria failed in one assessment method cannot then be demonstrated in the other assessment method. All EPA methods must be passed for the EPA to be passed overall.

Grades from individual assessment methods will be combined in the following way to determine the grade of the EPA as a whole:

Project Evaluation Report, Presentation and Questioning	Professional Discussion	Overall Grading
Fail	Fail	Fail
Any grade	Fail	Fail
Fail	Any grade	Fail
Pass	Pass	Pass
Distinction	Pass	Merit
Pass	Distinction	Merit
Distinction	Distinction	Distinction

Re-sits and Re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take at the employer's discretion. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

A re-sit does not require further learning, whereas a re-take does. Apprentices should have a supportive action plan to prepare for a re-sit or a re-take.

The employer and EPAO agree the timescale for a re-sit or re-take. A re-sit is typically taken within three months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within six months of the EPA outcome notification.

If the apprentice fails the project assessment method, they must amend the project output in line with the independent assessor's feedback. The apprentice will be given two weeks to rework and submit the amended report.

Failed assessment methods must be re-sat or re-taken within a six-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.

Re-sits and re-takes are not offered to an apprentice wishing to move from pass to a higher grade.

An apprentice will get a maximum EPA grade of pass for a re-sit or re-take, unless the EPAO determines there are exceptional circumstances.

Specimen

All specimen materials can be accessed by registered training providers from the knowledge area on ACE360.

Accelerate People

Accelerate People are an independent EPAO specialising in apprenticeship EPAs. If you have any questions or queries relating to this qualification specification or EPA, please contact us using the details below.

Registered training providers with Accelerate People can access further guidance material on the knowledge base on ACE360.

Contact Details

Email: info@accelerate-people.co.uk

Visit: www.accelerate-people.co.uk

Registered office: Accelerate People Limited, Scale Space, Imperial College White City Campus, 58 Wood Lane, London, W12 7RZ.

Registered in England with number: 09577006.

Registered Apprenticeship Assessment Organisation Number: EPO 0475.


Accelerate People