Accelerate People

Qualification Specification

Accelerate People L7 EPA for Artificial Intelligence Data Specialist

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Version History		
Version	**Date Amended**	**Changes Made**
1.0	Nov 2022	Document created.
2.0	April 2023	Edits to wording throughout to focus on assessment criteria. QAN added.
2.1	January 2025	Document rebranded.
3.0	February 2025	Edited gateway requirements to accommodate change in policy for English and Maths requirements.

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Contents

Qualification Objective

The level 7 Artificial Intelligence (AI) Data Specialist 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 the digital 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 7 AI Data Specialist Apprenticeship

Role Profile:

This occupation is found in any sector or organisation that analyses high-volume or complex data sets using advanced computational methods, such as Agriculture, Environmental, Business, Leisure, Travel, Hospitality, Education, Public Services, Construction, Creative and Design, Media, Engineering, Technology, Manufacturing, Health, Science, Legal, Finance, Accountancy, Sales, Marketing, Procurement, Transport and Logistics

The broad purpose of the occupation is to discover and devise new data-driven AI solutions to automate and optimise business processes and to support, augment and enhance human decision-making. AI Data Specialists carry out applied research in order to create innovative data-driven artificial intelligence (AI) solutions to business problems within the constraints of a specific business context. They work with datasets that are too large, too complex, too varied or too fast, that render traditional approaches and techniques unsuitable or unfeasible.

AI Data Specialists champion AI and its applications within their organisation and promote adoption of novel tools and technologies, informed by current data governance frameworks and ethical best practices.

They deliver better value products and processes to the business by advancing the use of data, machine learning and artificial intelligence; using novel research to increase the quality and value of data within the organisation and across the industry. They communicate, internally and externally, with technology leaders and third parties.

In their daily work, an employee in this occupation interacts with a broad spectrum of people and collaborates with, and provides technical authority and insight to, a diverse business community of Senior Leaders Data Scientists, Data Engineers, Statisticians, Analysts, Research and Development Scientists and Academics. Their interactions extend to working externally alongside other organisations, such as local and international governments, businesses, policy regulators, academic research scientists and non-technical audiences. They will work independently and collaboratively as required, reporting to Heads of Data, Chief Architects, Company Directors, Product Managers and senior decision makers within any organisation.

An employee in this occupation will be responsible for initiating new projects in an agile environment, and collaboratively maintaining technical standards within AI solutions applied across the organisation and its customers. They lead research into AI and its potential application within the business. They collaborate with and influence policy and operations teams to identify areas where AI solutions can create new business opportunities and efficiencies.

Typical Job Titles:

AI Strategy Manager, Artificial Intelligence Engineer, Artificial Intelligence Specialist, Director AI, Machine Learning Engineer, Machine Learning Specialist.

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: Initiate new projects in an agile environment, and collaboratively maintain technical standards within AI solutions applied across the organisation and its customers.

Duty 2: Critically evaluate and synthesise research findings in AI and related fields and translate into organisational context.

Duty 3: Use the conclusions drawn from applied research in order to develop innovative, scalable data-driven AI solutions for business problems.

Duty 4: Contribute to the development and ethical and legal conduct of AI systems and processes, in line with organisational and regulatory requirements.

Duty 5: Investigate and devise the most efficient and effective architectures, to enable and maximise the use and impact of AI systems and solutions for the organisation.

Duty 6: Develop innovative approaches to tackle known business problems that previously did not have a feasible solution within the constraints of a specific business context.

Duty 7: Initiate and design scalable batch/real-time analytical solutions to business problems leveraging AI and related technologies such as, data science, machine learning and statistics and related technologies.

Duty 8: Enhance awareness of the wider application of AI tools and technologies across the business so that opportunities for its use can be identified.

Duty 9: Develop and architect new robust data sourcing and processing systems to serve the organisation.

Duty 10: Design technical roadmaps for data life-cycles ensuring appropriate support and business processes are in place.

Duty 11: Create and optimise efficient mechanisms for accessing and analysing datasets that are too large, too complex, too varied or too fast, that render traditional approaches and techniques unsuitable or unfeasible, in order to deliver business outcomes.

Duty 12: Identify best practice in AI data systems, data structures, data architecture and data warehousing technologies and provide technical oversight in order to meet business objectives.

Duty 13: Assess risks/limitations and quantify biases associated with applications of AI within given business contexts.

Duty 14: Provide technical authority for the business regarding emerging opportunities for AI.

Duty 15: Practice continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development.

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 7 AI Data Specialist apprenticeship apprentices must achieve at least a pass in each EPA assessment method. This EPA consists of three discrete assessment methods which have the following grades awarded.

Assessment Method 1 (AM1): Project report with presentation and supplementary questioning.

- Fail.
- Pass.
- Distinction.

Assessment Method 2 (AM2): Professional discussion.

- Fail.
- Pass.
- Distinction.

Assessment Method 3 (AM3): Technical test.

- Fail.
- Pass.
- Distinction.

All assessment methods must be taken within a six-month period, otherwise the entire EPA will need to be re-sat/re-taken.

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 employer is satisfied that the apprentice is working at or above the occupational standard.
- 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:
    - Demonstrating where evidence has met the outcomes listed on the standard.
    - Demonstrating where the knowledge has been completed and uploading evidence of any certificates, if applicable.
    - Confirming the preferred date for each assessment method.

    - 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.
- 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 apprentice's project brief (for AM1), see Project for further details.

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.

Project Brief

The project brief is to be submitted to the EPAO at the gateway:

- The project brief must have a real business application and is based on a pre gateway work-based project.
- The project brief must scope out the work-based project and should include a summary of the stages covered by the work-based project and an overview of the tasks as well as the specific responsibilities and duties assigned and undertaken by the apprentice.
- The project brief should typically be no more than 500 words and is not an assessed element of the EPA.
- Within two weeks of receiving the project brief the EPAO will confirm the title of the project report.

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: How to use AI and machine learning methodologies such as data-mining, supervised /unsupervised machine learning, natural language processing, machine vision to meet

business objectives.

K2: How to apply modern data storage solutions, processing technologies and machine learning methods to maximise the impact to the organisation by drawing conclusions from applied research.

K3: How to apply advanced statistical and mathematical methods to commercial projects.

K4: How to extract data from systems and link data from multiple systems to meet business objectives.

K5: How to design and deploy effective techniques of data analysis and research to meet the needs of the business and customers.

K6: How data products can be delivered to engage the customer, organise information or solve a business problem using a range of methodologies, including iterative and incremental development and project management approaches.

K7: How to solve problems and evaluate software solutions via analysis of test data and results from research, feasibility, acceptance and usability testing.

K8: How to interpret organisational policies, standards and guidelines in relation to AI and data.

K9: The current or future legal, ethical, professional and regulatory frameworks which affect the development, launch and ongoing delivery and iteration of data products and services.

K10: How own role fits with, and supports, organisational strategy and objectives.

K11: The roles and impact of AI, data science and data engineering in industry and society.

K12: The wider social context of AI, data science and related technologies, to assess business impact of current ethical issues such as workplace automation and misuse of data.

K13: How to identify the compromises and trade-offs which must be made when translating theory into practice in the workplace.

K14: The business value of a data product that can deliver the solution in line with business needs, quality standards and timescales.

K15: The engineering principles used (general and software) to investigate and manage the design, development and deployment of new data products within the business.

K16: Understand high-performance computer architectures and how to make effective use of these.

K17: How to identify current industry trends across AI and data science and how to apply these.

K18: The programming languages and techniques applicable to data engineering.

K19: The principles and properties behind statistical and machine learning methods.

K20: How to collect, store, analyse and visualise data.

K21: How AI and data science techniques support and enhance the work of other members of the analytical team.

K22: The relationship between mathematical principles and core techniques in AI and data science within the organisational context.

K23: The use of different performance and accuracy metrics for model validation in AI projects.

K24: Sources of error and bias, including how they may be affected by choice of dataset and methodologies applied.

K25: Programming languages and modern machine learning libraries for commercially beneficial scientific analysis and simulation.

K26: The scientific method and its application in research and business contexts, including experiment design and hypothesis testing.

K27: The engineering principles used (general and software) to create new instruments and applications for data collection.

K28: How to communicate concepts and present in a manner appropriate to diverse audiences, adapting communication techniques accordingly.

K29: The need for accessibility for all users and diversity of user needs.

Skills

S1: Use applied research and data modelling to design and refine the database & storage architectures to deliver secure, stable and scalable data products to the business.

S2: Independently analyse test data, interpret results and evaluate the suitability of proposed

solutions, considering current and future business requirements.

S3: Critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make recommendations and to enable a business solution or range of solutions to be achieved.

S4: Communicate concepts and present in a manner appropriate to diverse audiences, adapting communication techniques accordingly.

S5: Manage expectations and present user research insight, proposed solutions and/or test findings to clients and stakeholders.

S6: Provide direction and technical guidance for the business with regard to AI and data science opportunities.

S7: Work autonomously and interact effectively within wide, multidisciplinary teams.

S8: Coordinate, negotiate with and manage expectations of, diverse stakeholders, suppliers with conflicting priorities, interests and timescales.

S9: Manipulate, analyse and visualise complex datasets.

S10: Select datasets and methodologies most appropriate to the business problem.

S11: Apply aspects of advanced maths and statistics relevant to AI and data science that deliver business outcomes.

S12: Consider the associated regulatory, legal, ethical and governance issues when evaluating choices at each stage of the data process.

S13: Identify appropriate resources and architectures for solving a computational problem within the workplace.

S14: Work collaboratively with software engineers to ensure suitable testing and documentation processes are implemented.

S15: Identify, develop, build and maintain the services and platforms that deliver AI and data science.

S16: Define requirements for, and supervise implementation of, and use of data management infrastructure; including enterprise, private and public cloud resources and services.

S17: Consistently implement data curation and data quality controls.

S18: Develop tools that visualise data systems and structures for monitoring and performance.

S19: Use scalable infrastructures, high performance networks, infrastructure and services management and operation to generate effective business solutions.

S20: Design efficient algorithms for accessing and analysing large amounts of data, including Application Programming Interfaces (API) to different databases and data sets.

S21: Identify and quantify different kinds of uncertainty in the outputs of data collection, experiments and analyses.

S22: Apply scientific methods in a systematic process through experimental design, exploratory data analysis and hypothesis testing to facilitate business decision making.

S23: Disseminate AI and data science practices across departments and in industry, promoting professional development and use of best practice.

S24: Apply research methodology and project management techniques appropriate to the organisation and products.

S25: Select and use programming languages and tools, and follow appropriate software development practices.

S26: Select and apply the most effective/appropriate AI and data science techniques to solve complex business problems.

S27: Analyse information, frame questions and conduct discussions with subject matter experts and assess existing data to scope new AI and data science requirements.

S28: Undertakes independent, impartial decision-making respecting the opinions and views of others in complex, unpredictable and changing circumstances.

Behaviours

B1: A strong work ethic and commitment in order to meet the standards required.

B2: Reliable, objective and capable of independent and team working.

B3: Acts with integrity with respect to ethical, legal and regulatory ensuring the protection of personal data, safety and security.

B4: Initiative and personal responsibility to overcome challenges and take ownership for solutions.

B5: Commitment to continuous professional development; maintaining their knowledge and skills in relation to AI developments that influence their work.

B6: Is comfortable and confident interacting with people from technical and non-technical backgrounds. Presents data and conclusions in a truthful and appropriate manner.

B7: Participates and shares best practice in their organisation, and the wider community around all aspects of AI data science.

B8: Maintains awareness of trends and innovations in the subject area, utilising a range of academic literature, online sources, community interaction, conference attendance and other methods.

Assessment

AM1: Project with Presentation and Questioning

The apprentice will submit an electronic-based project report to the EPAO after a maximum of 6 weeks following EPAO sign-off of the project brief. They will also submit a presentation based on the project report to the EPAO after a maximum of 8 weeks following EPAO sign-off of the project brief. Apprentices will prepare their project report and presentation once they have passed the gateway. Following submission of the project report, the presentation with questioning will take place with an independent assessor.

Project Report

Whilst completing the project report, the apprentice should be subject to normal workplace supervision.

The project report must be based on a pre-gateway real work-based project carried out in the employer's workplace as part of the apprentice's day-to-day activities. The project report may be based on any of the following:

- An idea/opportunity to use AI or new developments in the AI/Machine Learning field in the business.
- A specific business problem to be addressed using AI.
- A recurring issue.

The project report has a maximum word limit of 5,000, with a tolerance of plus or minus 10% (anything outside of this will be marked as a failure). Appendices, references, diagrams and/or video clips of up to 10 minutes in length are not included in this total (the video clip must be a file that can be uploaded, not a link to a video). The project must map (in an appendix) how it evidences the relevant KSBs for this assessment method as per the table below.

As a minimum all project reports must include:

- Introduction and background.
- Outline of the issue or opportunity and the business problem to be solved.
- Methods used & justification.
- The scope of the project (including key performance indicators).
- Data selection, collection & pre-processing.
- Survey of potential alternatives.
- Implementation - performance metrics.
- Results.
- Discussion & conclusions/recommendations.
- Summary of findings.
- Implications.
- Caveats & limitations.
- Appendices.
    - Code & documentation used for the project e.g., coding developed.
    - Statistical rigour - To include uncertainty/bias/error estimates as appropriate.
    - Figures/tables/visualisation as appropriate to project.
    - Mapping of the project report to the KSBs mapped to this method.
    - Verification by the apprentice's employer that the project report is a true reflection of the apprentice's involvement, and the report is their own work.

Presentation with Supplementary Questioning

Apprentices will prepare their presentation once they have passed the gateway and will submit an electronic-based presentation to the EPAO after a maximum of 8 weeks following EPAO sign-off of the project brief.

The presentation will be based on the project report and will cover:

- A high-level summary of the main aspects of the project report.
- Context/implications/recommendations from the project report.
- Research undertaken.
- Practical application of knowledge, skills and behaviours to complete the project report.
- Business recommendations.
- Any follow-on outcomes.
- Actions and next steps.

The presentation with supplementary questioning will focus on the content of the project report. The questioning is a structured conversation with an independent assessor and is designed to draw out the best of the apprentice's competence and excellence and covers the assessment criteria assigned to this assessment method.

Key points:

- Presentation with supplementary questioning 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 questioning will be cancelled.
- Apprentices are required to notify the EPAO at submission of any technical requirements for the presentation component.
- The presentation with supplementary questioning will last for 75 minutes, the presentation will last 30 minutes, and the questioning will last for 45 minutes, with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last point.
- A minimum of 10 questions will be asked based on both the 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 10 days' notice of the presentation with questioning date.

AM2: Professional Discussion

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 discussion will last for 60 minutes with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last answer.
- A minimum of 10 questions will be asked and will be formed based on the grading requirements in the table below.

AM3: Technical Test

The technical test will take place after the gateway has been confirmed.

- It will take place online via an online learning platform.
- The test will be conducted in the presence of an invigilator.
- 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 technical test will be cancelled.
- Apprentices have a maximum of 100 minutes to complete the test.
- The technical test is a closed-book test consisting of four long response questions based on scenarios and will be formed based on the grading requirements in the table below.

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Assessment Criteria

AM1

KSB	Theme	Pass Criteria	Distinction Criteria
K1, K3, K5, K6, K13, K14, K23, K26, K28. S2, S3, S4, S5, S7, S9, S10, S11, S15, S17, S18, S22, S24, S25, S27. B2, B6.	Awareness of the opportunities of AI and data science to create business value and growth. (K13, K14)	AI and data science solution developed within the project addresses a business need in line with quality standards and timescales. The business value of a data product / solution and any constraints making trade-offs accordingly have been considered.	Articulates a commercial awareness of organisational priorities. Explains how the practical trade-offs in implementing an AI or data science solution for the particular business context have been addressed and shape the solution accordingly to optimise outcomes.
	Critically evaluate the effectiveness and performance of proposed AI and data science solutions. (K23, S3, S17)	Critically evaluates the performance of developed AI and machine models and the steps taken to mitigate sources of error and bias. Considers and selects from a range of appropriate principles, techniques and solutions to enhance the robustness of decisions at all stages. Critically evaluates the arguments,	Critically evaluates and adapts practice making recommendations for communicating technical methodology. Explains when they have effectively communicated technical information in a team context which has influenced others and impacted positively on decisions or working practices.

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KSB	Theme	Pass Criteria	Distinction Criteria
		assumptions, abstract concepts and data to make business focussed recommendations. Demonstrates how, from the range of possible solutions presented, they contributed to identifying the optimal solution. Explains how they implement data curation and data quality controls in line with organisational and regulatory requirements.	
	Apply systematic methodology and project management principles in the delivery of innovative, stable and robust solutions. (S2, S9, S10, S22, S25)	Selects and uses datasets, programming languages, tools and scientific methodologies to research business problems, providing a clear justification for their selection. Analyses and critically evaluates test data and proposed solutions, considering current and future business requirements. Manipulates and analyses complex datasets and critically evaluates arguments, assumptions, abstract concepts and data (that may be	

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KSB	Theme	Pass Criteria	Distinction Criteria
		incomplete) to make recommendations and to enable a business solution or range of solutions to be achieved.	
	AI Project and Development Management. (K6, S24)	Correctly selects and applies development, research methodology and project management techniques to engage with customers and solve the business problem being addressed.	Can evidence suitable methodology and tools have been selected with understanding of the impact of this choice on working practice, along with the risks to continuity of working practice that may arise if such solutions are not utilised.
	Use of communication and influencing skills across teams. (K28, S4, S5, S7, S27, B2, B6)	Describes how they have worked with a range of technical and non-technical stakeholders adapting their approach successfully to meet their diverse needs. Explains how to work autonomously and collaboratively with multidisciplinary teams indicating when each would be appropriate. Describes how they have analysed information and data, using questioning and discussions with subject matter experts to scope new AI and data science requirements.	Explains how they adapted their approach with a range of technical and non-technical stakeholders and in different situations in order to achieve the best outcome for the business. Evaluates solutions and explains the risks and implications of the AI data science requirements and alternative approaches and ways to address them.

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KSB	Theme	Pass Criteria	Distinction Criteria
		Written and verbal communication is clear, structured and appropriate for the audience. Explains how to work with software engineers to ensure suitable testing and documentation processes are implemented.	
	Application of technical knowledge. (K1, K3, K5, K26, S11, S15, S18)	Describes how they applied appropriate scientific and technological methods for machine learning, AI and data science solutions, services and platforms to deliver business outcomes outlining successes and challenges.	Explains the rationale for selecting particular technical solutions, including the relevant consideration of scientific benefit and suitability for working practices. Appraises AI and/or Data solutions and explains the risks and implications of the process, alternative approaches and ways to address them.

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AM2

KSB	Theme	Pass Criteria	Distinction Criteria
K7, K8, K10, K11, K16, K17, K18, K19, K21, K22, K25, K29. S1, S6, S8, S12, S14, S16, S19, S20, S23, S26, S28. B1, B3, B4, B5, B7, B8.	Use and knowledge of computing and statistical foundations of AI and data science. (K7, K16, K18, K19, K22, K25, S1, S16, S19, S20, S26)	Describes how to use statistical, AI and machine learning methodologies such as datamining, supervised/unsupervised machine learning, natural language processing and machine vision to meet business objectives. Explains how to solve problems and evaluate software solutions via analysis of test data and results from research, feasibility, acceptance and usability testing in line with organisational requirements. Describes the relationship between mathematical principles and core techniques in AI and data science within the organisational context. Explains how they have used programming languages and modern machine learning libraries for commercially beneficial scientific analysis, simulation and data	Explains when they have challenged the norm through investigating and proposing a solution and the impact this had.

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KSB	Theme	Pass Criteria	Distinction Criteria
		engineering to meet business needs. Uses applied research and data modelling to design and refine the infrastructure and architectures to deliver secure, stable and scalable data products; including enterprise, private and public cloud resources and services. Explains how to design algorithms for accessing and analysing large amounts of data, including Application Programming Interfaces (API) to different databases and data sets.	
	Professional practice in a commercial environment. (K8, K10, S6, S8, S14, S23, S28, B1, B4, B7)	Explains how they have developed their professional working practices and leadership techniques in regards to AI and data science and how this has improved organisational practice. Justifies their choice of techniques, explaining the risks and benefits and offers an alternative to technical and non-technical audiences.	Critically analyses the wider social context and current issues and trends, applying the findings with justification and shares these with the wider community.

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KSB	Theme	Pass Criteria	Distinction Criteria
		Explains how they share and disseminated AI and data science practices across organisations to improve industry practice. Explains how they have made independent impartial decisions respecting the opinions and views of others in complex, unpredictable and changing circumstances to benefit the business. Explains how they have worked with software engineers to ensure suitable testing and documentation processes are implemented in line with organisational requirements.	
	Awareness of the current and future impact of AI and data science for industry and society. (K11, K17, K21)	Describes how the potential roles and impact of AI and data science could affect own organisation, industry and society. Explains how they have assessed and addressed the potential business impact of ethical issues relating to AI and Data Science, the way procedures and methods are	

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KSB	Theme	Pass Criteria	Distinction Criteria
		selected, and the unintended consequences to the business when they are applied. Describes how they have applied solutions, demonstrated awareness and explained the changes and trends that have led to the enhancement the working practices within their organisation and other members of the team. Explains the impact, consequences and risks of non-compliance to the business.	
	Development of suitable AI and data science solutions, with consideration for ethical, legal, regulatory and governance issues. (K29, S12, B3)	Evaluates the regulatory, ethical, and legal requirements that affect implementation of solutions including the need for accessibility for all users and diversity of user needs.	
	Continuous Professional Development. (B5, B8)	Analyses how they take responsibility for their own and their team's currency of knowledge and skills, their professional and personal growth and development.	

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KSB	Theme	Pass Criteria	Distinction Criteria
		Explains how they selected and applied the most effective/appropriate AI and data science techniques to solve a complex business problem in line with organisational and regulatory requirements.	

AM3

KSB	Theme	Pass Criteria	Distinction Criteria
K2, K4, K9, K12, K15, K20, K24, K27. S13, S21.	Deliver AI and data science solutions Effectively. (K2, K4, K20, K24, S21)	Describes the key theoretical and technical aspects which underpin AI and data science, ensuring effective identification, delivery and implementation. Describes appropriate means of exposure, linking, storage, analysis and visualisation of complex datasets. Differentiates between the types of uncertainty associated with the	Compares different data storage, processing, and machine learning methods and concludes which is the most effective and why. Explains the differences between uncertainty in the outputs of data collection and analysis.

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KSB	Theme	Pass Criteria	Distinction Criteria
		outputs of data collection and analysis. Outlines how choice of dataset and methodologies applied could be a source of error and bias.	
	Manage the delivery of AI and data science solutions, appropriate to the business problem, and with awareness of relevant legal, ethical, professional and regulatory constraints. (K9, K12)	Describes the relevant ethical, legal, professional and regulatory constraints in the context of an AI solution and outlines how ethical issues impact on the wider social context of AI, data science and related technologies.	Assesses the business impact of adhering to relevant ethical, legal, professional and regulatory requirements.
	Use of appropriate methodologies, architectures and engineering principles. (K15, K27, S13)	Selects and applies appropriate methodologies and engineering principles to manage the design, development and deployment of AI and data science solutions. Describes the appropriate resources and architecture needed to solve a business problem within given constraints.	Justifies the choice of methodology, explaining the risks and benefits and offers an alternative.

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 an assessment criterion failed in one assessment method cannot then be demonstrated in another assessment method. All EPA methods must be passed for the EPA to be passed overall.

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

Assessment Method 1 – Project Report with Presentation and Supplementary Questioning	Assessment Method 2 – Professional Discussion	Assessment Method 3 – Technical Test	Overall Grading
Fail	Fail	Fail	**Fail**
Fail	Fail	Pass	**Fail**
Pass	Fail	Fail	**Fail**
Pass	Fail	Pass	**Fail**
Fail	Pass	Pass	**Fail**
Pass	Pass	Fail	**Fail**
Fail	Pass	Fail	**Fail**
Pass	Pass	Pass	**Pass**
Distinction	Pass	Pass	**Pass**
Pass	Distinction	Pass	**Pass**
Pass	Pass	Distinction	**Pass**
Distinction	Pass	Distinction	**Merit**
Pass	Distinction	Distinction	**Merit**
Distinction	Distinction	Pass	**Merit**
Distinction	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.

An apprentice who fails one or more assessment methods, and therefore the EPA in the first instance, will be required to re-sit or re-take the failed assessment method(s) only.

If an apprentice fails assessment method 1: project report with presentation and supplementary questioning, the apprentice must produce and submit a new project report and presentation. In this circumstance, the apprentice will be given a further 6 weeks in which to write and submit a new report followed by a further 2 weeks in which to submit a new presentation.

Any assessment method re-sit or re-take must be taken during the maximum EPA period, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass/merit to a higher grade.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a

maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Specimen

All specimen materials, such as an example project, can be accessed by registered training providers from the knowledge area on ACE360.

Accelerate People

Accelerate People are an independent EPAO specialising in digital 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

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