Overview

This standard identifies the competences you need to assist in the development and implementation of artificial intelligence (AI) solutions, in accordance with approved procedures.

In order to do this, you are required to have the knowledge, skills and understanding necessary to assist in the development of a range of data sourcing, data processing and data-driven AI solutions. A typical AI solution analyses its environment and takes actions in response, this often revolves around the use of algorithms that operate on a range of data sources.

This standard does not involve direct machine learning activities, which are covered in a separate standard.

You will be required to use approved tools and techniques associated with artificial intelligence activities, and to apply a range of AI methods to solve specific problems. AI is a general-purpose technology with many potential applications, and so needs to be contextualised to solve or automate specific outcomes.

Where appropriate, you may assist in working with data sources, pre-processing data, developing algorithms or testing outcomes and comparing different approaches.

You will be required to work under close supervision and follow instructions but take responsibility for the quality, accuracy and efficacy of the AI work that you carry out, ensuring that your work complies with organisational policies and procedures and legal requirements, and follow applicable industry codes of practice.

You will be expected to work to instructions, alone or in conjunction with others, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide an understanding of the principles of AI, potential applications and use of tools, methods and trends. You will have an understanding of the AI solutions being developed and implemented, at an adequate depth to provide a sound basis for carrying out the AI work to meet organisational needs.

This role can be increasingly found in any sector or organisation and in particular those associated with the analyses of high-volume or complex data sets using advanced computational methods.

This activity is likely to be undertaken by people working as Junior AI Data Specialists, Junior AI Data Technologists, Junior Data Analysts, Junior AI Data Engineers etc.

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Performance criteria

You must be able to:

1. Identify data sources and datasets with respect to the artificial intelligence problem specification
2. Follow all relevant organisational policies and procedures for the artificial intelligence tasks being carried out
3. Assist with the design, development, implementation, and maintenance of data processing systems for ingestion into artificial intelligence solutions
4. Assist with the implementation of artificial intelligence solutions into production environments to address data-driven problems
5. Use approved tools and techniques for defined artificial intelligence problems
6. Assist in using testing methods and techniques on the developed artificial intelligence solutions to identify errors and verify the correct outcomes
7. Assist with the creation of documentation used to inform others on the role of artificial intelligence solutions within the organisation

Knowledge and understanding

You need to know and understand:

1. The benefits of artificial intelligence for individuals, organisations and society
2. The types of problem that artificial intelligence can solve
3. The range of applications of artificial intelligence in different vocational fields
4. The procedures used to collect, store, analyse and visualise data
5. The main principles of artificial intelligence and how to apply them
6. The range of artificial intelligence tools and techniques that can be used to solve problems
7. The main artificial intelligence methods and when and where to use them
8. The principles and properties behind statistical methods for AI
9. How to review requirements specifications to confirm the artificial intelligence work aims and objectives
10. The importance of testing artificial intelligence solutions to identify errors and verify their outcomes
11. The functional and technological limitations of current artificial intelligence technologies and methods
12. The distinction between artificial intelligence and machine learning
13. The industry standard artificial intelligence frameworks and how to apply them

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Developed by	ODAG
Version Number	1
Date Approved	March 2020
Indicative Review Date	March 2023
Validity	Current
Status	Original
Originating Organisation	ODAG Consultants Ltd
Original URN	TECIS804301
Relevant Occupations	Data Operations; Software Development
Suite	IT and Telecoms
Keywords	Artificial intelligence, data science