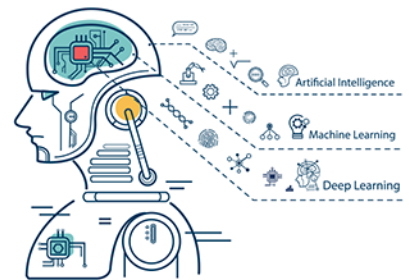# ARTIFICIAL INTELLIGENCE

What is AI?

AI is a machine/ algorithm with the ability to solve problems that are usually done by humans with their natural intelligence. It is the science and engineering of making intelligent machines, especially intelligent computer programs*.

Who are AI specialists?

AI specialists are the one who can:

- Develop, test, and deploy AI models
- Convert machine learning models into APIs
- Build models
- Understand the model

Why assessments for AI?

Support critical talent decisions for AI development, deployment, and other operations through objective and reliable talent measurement specific to the organization across multi-faceted skills and knowledge areas.

* A Computer would demonstrate a form of intelligence when it learns to improve itself by solving these problems

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Empower Results®

How to Identify Talent – Requirements

I need to identify and hire potential candidates for Artificial Intelligence for different job roles. I do have a few candidates but:

Umm.. While I need to hire candidates possessing some expertise
Do they have desired level of domain expertise?
Do they have tool knowledge and hands-on experience?

And talking about some specialized roles
How can I check the concepts or programming knowledge required for a specialized role?

Are they good at communicating with others?

Can they learn fast and are they trainable?

Do they possess good problem solving skills?

Are they technically sound?

Are they a culture and role fit or not?

Do they have the basic knowhow of AI and ML?

Do they possess good programming skills?

Do they have the knowledge of concepts of Modern Mathematics and Statistics and can they apply them?

While I need to assess all these but
I also want to save my interview bandwidth
How can I do that?

Mapping Requirements to Assessments

Requirements	Abilities/Knowledge Areas	Assessment Name	🕐
General mental ability and reasoning capacity Should possess learning and training agility Should be proficient in Communication	Analytical Ability Quantitative Ability Reading Comprehension WET (Written English Test)	**Cognitive Ability** **(20 items)** **Communication Skills** **(1 item)**	35-50 Minutes
Linear Algebra, Probability, and Statistics Basic Knowhow of AI and ML Data structure and Algorithm	Basic AI and ML concepts Concepts of SQL Modern Mathematics and Statistics Data Structure and Algorithm	**Generic Domain Skills** **(20 – 30 items)**	20-30 Minutes
Specific skills required for each specialization	AI Developer AI Architect Machine Learning Engineer Research Scientist Big Data Engineer	**Specialized Domain Skills** **(20 – 30 items)**	20-30 Minutes
Should possess coding/ programming ability to write code that are logically correct, complete and algorithmically efficient.	Coding problems at various difficulty levels (L1 to L4) Data Science with Python, Java, R SQL Query Problems	**Coding Simulation**	20-30 Minutes each
Should possess certain behavioral aspects and preferences that are critical for successful performance in the role	Result & Goal Orientation Systematic Approach Readiness to Learn Flexibility, etc.	**Work-Related Behavior***	15-20 Minutes

* Optional Module

Artificial Intelligence – Tracks

```
                        Artificial
                       Intelligence

        ┌──────────────────────┴──────────────────────┐

       Generic                          Job role focused
                                         AI Assessment

   ┌───────┴───────┐              ┌───────┴─────────┐

 Basic AI      Advanced AI    AI Developer      AI Architect

                          ┌─────────────┼─────────────┐

                      Research       Machine        Big Data
                      Scientist      Learning       Engineer
                                     Engineer
```
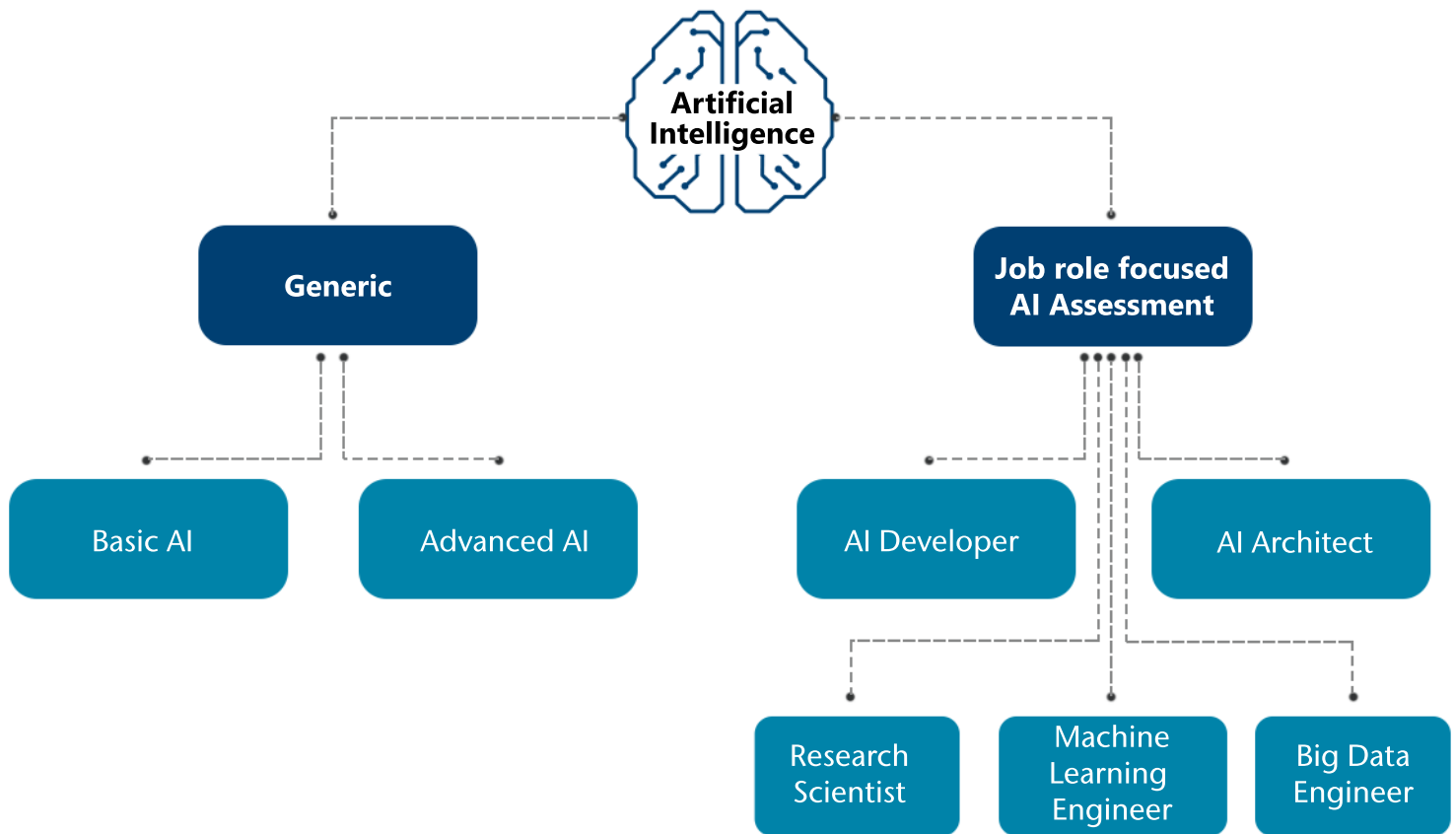
Generic Assessments will be relevant for the roles which require candidates to have a basic understanding of AI (can either be useful for supporting roles or act as building blocks for more specialized AI roles)

The Role-based Assessments will cover the specific technologies required for the mentioned relevant job roles.

Artificial Intelligence– Specializations

AI Developer

- **Programming Language**
- **Framework**
- Algorithm
- Probability and Statistics

AI Architect

- **Advanced Programming language**
- **Big Data**
- Machine learning-Basic and Advanced
- Statistical Analysis

Big Data Engineer

- **SQL**
- **Big Data**
- **Programming Language**
- Machine Learning Basics

Research Scientist

- **Advanced SQL**
- **Machine learning Frameworks**
- **Programming Language**
- Feature Extraction
- Deep Learning
- Advanced Machine Learning
- Data and Text Mining

Machine Learning Engineer

- **SQL**
- **Machine Learning Frameworks**
- Machine Learning Concepts
- Data Structures and Data Modelling

The sections marked as bold will have options to pick from

Options

Category			
Programming Language	R	python	Java
Framework	PyTorch	TensorFlow	theano
Big Data	Apache Spark	hadoop	cassandra
SQL	MySQL	Microsoft SQL Server	PostgreSQL

Assessment Solution *(Role-Wise Evaluation Framework)*

The relevance / importance of each evaluation method differs across the typical roles and their corresponding experience brackets – the table below indicates the recommended criticality
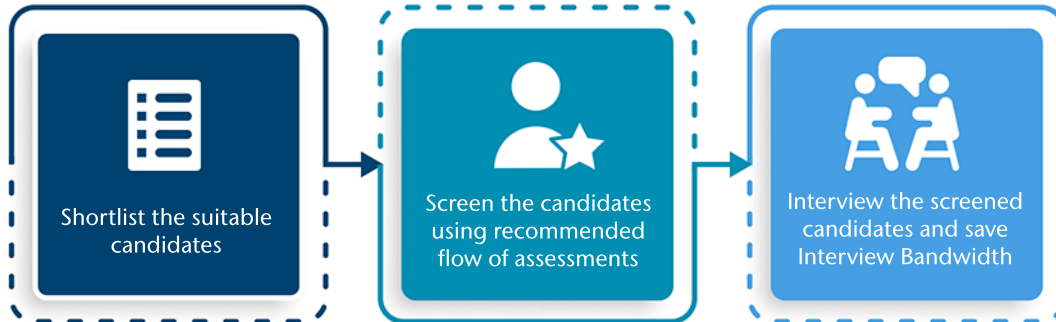
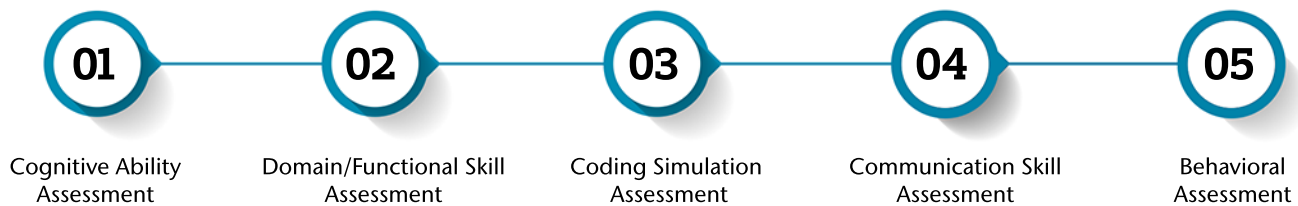| Package	Specialisation	Cognitive Ability & Communication Skills	Domain Specific	Coding Simulation	Work-Related Behaviour
Generic	Basic (Supporting roles)	High	Moderate	Low	Low
	Advanced	Moderate	High	Moderate	
Job role focused ✱	AI Developer	High	Moderate	High	Low
	AI Architect	Low	High	High	High
	Machine Learning Engineer	High	High	High	Moderate
	Research Scientist	Moderate	High	High	High
	Big Data Engineer	Moderate	High	High	Moderate

● Low   ● Moderate   ● High

✱ Job Role focused assessments will assess both the basic domain knowledge (which will be the same across specializations) and the specialization specific knowledge (which will be different for each specialization)

Assessment Flow

For any role, a holistic approach to candidate evaluation ensures information is captured on all skills / abilities / competencies for better decision making. The following is the recommended flow to assess and hire best fit candidates for the role, though this can be configured/ customized as per client's requirements.

Shortlist the suitable candidates → Screen the candidates using recommended flow of assessments → Interview the screened candidates and save Interview Bandwidth

Recommended Flow of Assessments

01	02	03	04	05
Cognitive Ability Assessment	Domain/Functional Skill Assessment	Coding Simulation Assessment	Communication Skill Assessment	Behavioral Assessment

About Assessment Solutions

Aon's Assessment Solutions includes the cut-e and CoCubes brands and operates as part of Aon's global Human Capital solutions, helping clients achieve sustainable growth by driving business performance through people performance. Aon's Assessment Solutions group undertakes 30 million assessments each year in 90 countries and 40 languages.

30M+ assessments carried out each year

500+ colleagues with assessment expertise

40+ available languages

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

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If you want to learn to more about Aon's Assessment Solutions, visit us at: assessment.aon.com.
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