

# ENGLISH CODE ARTIFICIAL INTELLIGENCE

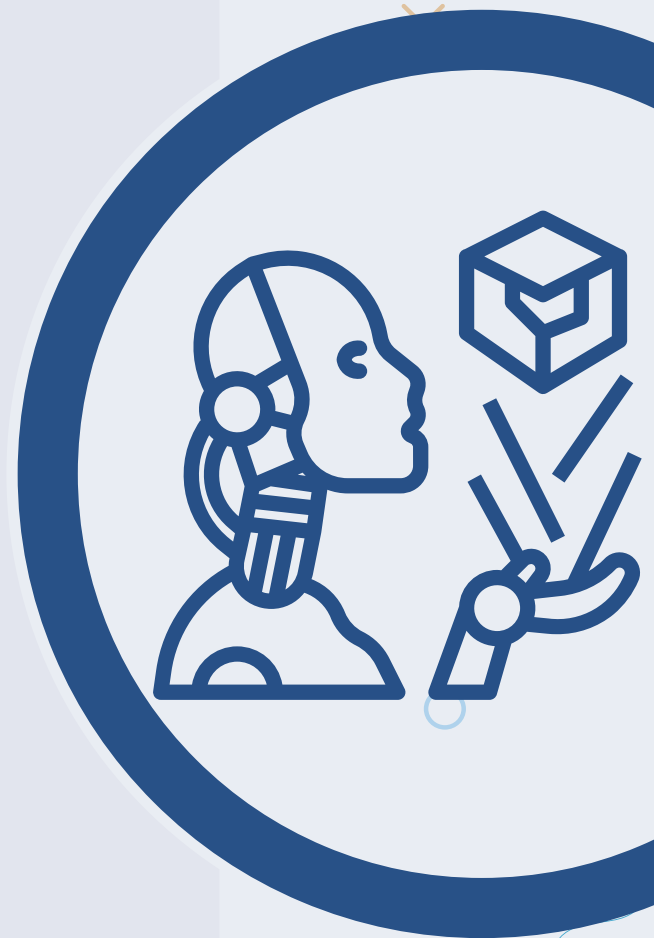
**INNOVATOR - Module 1**

**Unit 4**



# Contextualization of my learning

By the end of this module, participants will have undergone a thorough exploration of AI ethics, computer vision, and reinforcement learning, concurrently enhancing their reading and writing skills. The focus lies on dissecting various ethical frameworks integral to AI development, coupled with an in-depth understanding of crucial technical terms. Concepts like object detection, image segmentation, policy optimization, reward functions, and convolutional neural networks will be extensively covered, laying a robust foundation in computer vision. Moreover, learners will be introduced to cutting-edge trends in the field, including augmented reality, edge computing, and explainable AI, fostering a holistic comprehension of contemporary advancements in computer vision. This comprehensive approach ensures that participants not only refine their linguistic abilities but also gain a profound grasp of the intricacies within the domains of AI ethics, computer vision, and reinforcement learning.



# General objective

## UNIT 4

- Gain a comprehensive understanding of reinforcement learning, its principles, challenges, and applications.
- Articulate the main concepts associated with reinforcement learning, discuss its real-world implications, and analyze the challenges involved in implementing reinforcement learning projects.

## SKILLS TO DEVELOP

Linguistic competence.

Pragmatic competence.

Sociolinguistic competence.

Topical Competence.

**Linguistic Competence:** Students will demonstrate proficiency in understanding and using specialized vocabulary related to reinforcement learning, including key terms and technical language.

**Pragmatic Competence:** Students will develop the ability to apply theoretical knowledge of reinforcement learning in practical scenarios, such as discussing real-world challenges and proposing solutions based on the principles learned.

**Sociolinguistic Competence:** Students will engage in meaningful discussions, both orally and in writing, about the societal and ethical implications of reinforcement learning. They will demonstrate an understanding of how this technology influences various aspects of society, including its impact on decision-making, job automation, and ethical considerations.

**Topical Competence:** Students will exhibit a strong grasp of the core concepts, applications, and challenges associated with reinforcement learning. They will be able to critically analyze information, draw connections between different readings and activities, and articulate informed opinions on the subject.

# UNIT 4: Delve into discussions on common challenges faced in reinforcement learning projects and proposed solutions

Execution time: 4 hours.

## APPROACH OF THE SESSION

- 1) Inference reading explanation.
- 2) Video "Reinforcement learning"
- 3) Discussion questions based on the video.
- 4) Socialization key vocabulary "Reinforcement learning"
- 5) Reading comprehension "Reinforcement learning"
- 6) Multiple choice reading activity.
- 7) Pre-reading Vocabulary.
- 8) Reading comprehension activity "What are the main challenges of reinforcement learning, and how to overcome them?"
- 9) Checklist activity based on the reading text.
- 10) Socialization of key vocabulary reading activity #4
- 11) Reading comprehension activity #4 "How to Structure, Organize, Track and Manage Reinforcement Learning (RL) Projects"
- 12) True/False activity.

## MATERIALS

- Video "Reinforcement learning" Reinforcement Learning Basics
- Reading "What are the main challenges of reinforcement learning, and how to overcome them?"  
<https://analyticsindiamag.com/what-are-the-main-challenges-of-reinforcement-learning-and-how-to-overcome-them>
- Reading "How to Structure, Organize, Track and Manage Reinforcement Learning (RL) Projects"  
<https://neptune.ai/blog/how-to-structure-organize-track-and-manage-reinforcement-learning-rl-projects>



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