COLOMBIA POTENCIA DE LA VIDA

TIC

ENGLISH CODE ARTIFICIAL INTELLIGENCE

INNOVATOR - Module 1

Unit 5

TALENTO TECH | AZ PROYECTOS EDUCATIVOS | UTP Universidad Tecnológica de Pereira

Contextualization of my learning

In this module, participants will delve into the fascinating realm of reinforcement learning through insightful case studies that showcase its practical applications in diverse domains. By focusing on real-world scenarios in areas such as gaming, robotics, and decision-making, learners will explore the dynamic interplay between theoretical concepts and tangible outcomes. Through comprehensive readings and vocabulary exercises, participants will gain a profound understanding of how reinforcement learning algorithms are employed to optimize strategies in gaming environments, enhance robotic functionalities, and streamline decision-making processes. This module aims not only to broaden vocabulary related to reinforcement learning but also to empower learners with the ability to critically analyze and comprehend the nuanced applications of this cutting-edge technology in various industries.

General objective

UNIT 5

- To enable participants to comprehend the practical applications of reinforcement learning in diverse fields such as gaming, robotics, and decision-making. Learners will engage with case studies to gain insights into how reinforcement learning algorithms are effectively deployed to address real-world challenges.

SKILLS TO DEVELOP

- Linguistic competence.
- Pragmatic competence.
- Sociolinguistic competence.
- Topical Competence.

- **Linguistic Competence:** Enhance language skills to comprehend and articulate the technical aspects of case studies and industry applications in the field of artificial intelligence.
- **Pragmatic Competence:** Acquire the ability to apply theoretical knowledge of reinforcement learning in practical contexts.
- **Sociolinguistic Competence:** Develop the ability to discuss and communicate about the societal impact of AI technologies, considering factors such as ethical considerations, public perceptions, and potential socio-economic effects.
- **Topical Competence:** To enhance participants' vocabulary within the context of artificial intelligence (AI), specifically focusing on terms and terminology associated with reinforcement learning. By reading and analyzing case studies, learners will acquire a specialized vocabulary that facilitates a deeper understanding of the nuances and intricacies of reinforcement learning applications in industry.

Unit 5. Case studies on the practical applications of reinforcement learning in areas such as gaming, robotics, and decision-making

Execution time: 4 hours

APPROACH OF THE SESSION

1) Key word vocabulary comprehension: "The Power of Reinforcement Learning: From Gaming to Robotics"
2) Reading comprehension activity: "The Power of Reinforcement Learning: From Gaming to Robotics"
3) Inference multiple choice activity.
4) Discussion question about: "Reinforcement Learning in Games and Entertainment"
5) Before the reading activity, explain what reading in context is.
6) Socialize key words about the reading below.
7) Reading comprehension: "Reinforcement Learning in Games and Entertainment"
8) True/False activity about the previous reading.
9) Complete sentence activity about the reading "Reinforcement Learning in Games and Entertainment"
10) Video:"Boston Dynamics robot demo"
11) Discussion questions based on the video
12) Socialization of key vocabulary: "Introduction to Reinforcement Learning – A Robotics Perspective"
13) Reading comprehension: "Introduction to Reinforcement Learning – A Robotics Perspective"
14) Multiple choice activity.

MATERIALS

Reading: "The Power of Reinforcement Learning: From Gaming to Robotics"
https://medium.com/

Reading: "Reinforcement Learning in Games and Entertainment":
https://cinnamonai.medium.com/reinforcement-learning-in-games-and-entertainment-47ffb22b9b9e

Video: "Boston Dynamics robot demo":
https://www.youtube.com/watch?v=JcdPdNxZsSc

Reading comprehension: "Introduction to Reinforcement Learning – A Robotics Perspective":
https://lamarr-institute.org/blog/reinforcement-learning-and-robotics/

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