

Instructional Scenario

Machine Learning vs. Deep Learning



Course/Duty Area: Artificial Intelligence Fundamentals/Examining Neural Networks and Deep Learning

Scenario: Gaining an appreciation for how technologies such as artificial intelligence (AI) will change how people live in the future can better happen when you understand the way technologies have previously impacted how people live. Students will do this by researching the impact machine learning (ML) and deep learning (DL) have had on a specific industry.

Big Question: What are the different ways that ML and DL have impacted a specific industry?

Focused Questions:

- What is an industry that has been impacted by both ML and DL forms of AI?
- What are common ways that ML concepts are applied to a specific industry?
- What are common ways that DL concepts are applied to a specific industry?
- How does the industry use ML and DL to solve specific problems?

Student Project or Outcome: Students will start by selecting an industry of interest (such as medical, engineering, education, law, transportation) that has also been obviously impacted by the use of AI – specifically ML and DL. Next, students will research specific examples of actual and potential ML applications that have affected the industry. Students will then research actual and potential DL applications in the same industry. Students will use their research to compare and contrast the ways that ML and DL have impacted the use of data for the purpose of decision-making in the industry.

Project-Based Assessment: Students will create a poster presentation that highlights the impact that ML and DL have had on an industry, as well as contrast the types of problems addressed by each advancement in AI.