

## Week 1 Quiz 1

1. Which of these is the best definition of "Generative AI"?
  - Artificial intelligence systems that can map from an input A to an output B.
  - Any web-based application that generates text
  - A form of web search
  - AI that can produce high quality content, such as text, images, and audio.
2. A computer vision system "sees" objects in the same way that a living creature does.
  - True
  - False

*Computer vision systems work with pixel-level data, which is a series of numbers, and so do not "see" in the same way as living creatures, which recognize aggregate features or objects all at once.*

3. How does machine learning differ from traditional programming paradigms?
  - Machine learning doesn't require any input data, while traditional programming always uses data
  - Machine learning requires determining complex sets of rules before writing any computer programs
  - Machine learning uses robots to write code instead of human programmers.
  - Machine learning derives rules from data and known answers, rather than explicitly coding rules.

*Traditional programming involves expressing rules in code to act on data and get answers. In contrast, machine learning reverses this process by using data and answers to derive the rules.*

4. Machine learning is an iterative process. Which of the following are steps that you'll carry out during a machine learning project? Select all correct answers.
  - If your data is labeled, remove the labels to ensure that information does not affect the process of training the model
  - Write a program that makes an initial guess about the nature of the relationship between the data and their labels
  - Optimize your guess by learning from examples where the model could not predict the label of the input data
  - Provide the machine learning model with explicit rules that it should use to make predictions

5. Which of the following day-to-day software development tools have some Generative AI integrations powering them? Select all correct answers.

- Integrated Development Environments (IDEs)
- Search engines
- Image and game asset editors
- Debugging tools