



## AI Introduction

### Machine Learning, Deep Learning, Neural Networks

- ✓ **Video:** Terminology and Related Concepts  
3 min
- ✓ **Video:** Machine Learning  
4 min
- ✓ **Video:** Machine Learning Techniques and Training  
4 min
- ✓ **Video:** Deep Learning  
2 min
- ✓ **Video:** Neural Networks  
3 min
- ✓ **Reading:** Hands on Lab: Paint with AI  
15 min
- ✓ **Reading:** Lesson Summary  
10 min

### AI Application Areas

- ▶ **Video:** Key Fields of Application in AI  
4 min
- ▶ **Video:** Natural Language Processing, Speech, Computer Vision  
4 min
- ▶ **Video:** Self Driving Cars  
4 min
- ⌂ **Hands-On Lab:** Computer Vision  
15 min
- 📖 **Reading:** Lesson Summary  
10 min

### Week 2 Quiz

- 📋 **Quiz:** Graded: AI Concepts, Terminology, and



# Lesson Summary

In this lesson, you have learned:

- Machine Learning, a subset of AI, uses computer algorithms to analyze data and make intelligent decisions based on what it has learned. The three main categories of machine learning algorithms include Supervised Learning, Unsupervised Learning, and Reinforcement learning.
- Deep Learning, a specialized subset of Machine Learning, layers algorithms to create a neural network enabling AI systems to learn from unstructured data and continue learning on the job.
- Neural Networks, a collection of computing units modeled on biological neurons, take incoming data and learn to make decisions over time. The different types of neural networks include Perceptrons, Convolutional Neural Networks or CNNs, and Recurrent Neural Networks or RNNs.

In the Machine Learning Techniques and Training topic, you have learned:

- Supervised Learning is when we have class labels in the data set and use these to build the classification model.
- Supervised Learning is split into three categories – Regression, Classification, and Neural Networks.
- Machine learning algorithms are trained using data sets split into training data, validation data, and test data.

[Optional] To learn more about Machine Learning, Deep Learning, and Neural Networks, read these articles: