

## Welcome

- ✓ **Video:** Welcome to Machine Learning!  
1 min
- ✓ **Reading:** Machine Learning Honor Code  
8 min

## Introduction

- ✓ **Video:** Welcome  
6 min
- ✓ **Video:** What is Machine Learning?  
7 min
- ✓ **Reading:** What is Machine Learning?  
5 min
- ✓ **Reading:** How to Use Discussion Forums  
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- ✓ **Video:** Supervised Learning  
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- ✓ **Reading:** Supervised Learning  
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- ✓ **Reading:** Who are Mentors?  
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- ✓ **Reading:** Get to Know Your Classmates  
8 min
- ✓ **Reading:** Frequently Asked Questions  
11 min

## Review

### Model and Cost Function

### Parameter Learning

### Review

### Linear Algebra Review

### Review



## Unsupervised Learning

Unsupervised learning allows us to approach problems with little or no idea what our results should look like. We can derive structure from data where we don't necessarily know the effect of the variables.

We can derive this structure by clustering the data based on relationships among the variables in the data.

With unsupervised learning there is no feedback based on the prediction results.

### Example:

Clustering: Take a collection of 1,000,000 different genes, and find a way to automatically group these genes into groups that are somehow similar or related by different variables, such as lifespan, location, roles, and so on.

Non-clustering: The "Cocktail Party Algorithm", allows you to find structure in a chaotic environment. (i.e. identifying individual voices and music from a mesh of sounds at a [cocktail party](#)).

✓ Complete

Go to next item

