

Types of Machine Learning

Supervised Learning

- labeled data
- learn relationships

Examples:

- spam detection
- image classification

Unsupervised Learning

- unlabeled data
- find data structure

Examples:

- customer segmentation
- anomaly detection

Reinforcement Learning

- reward based
- find optimal strategy

Examples:

- game playing
- autonomous driving

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Supervised Learning Example

Cats vs. Dogs



- **2009 - world's most advanced computer can't tell a cat from a dog**
- **2012 - solved by Google *but* required 16,000 computers!**
- **2015 - Microsoft, Google beat humans at image recognition**
- **2019 - AI beats Stanford radiologists in chest X-ray diagnostics competition**