New Paradigms

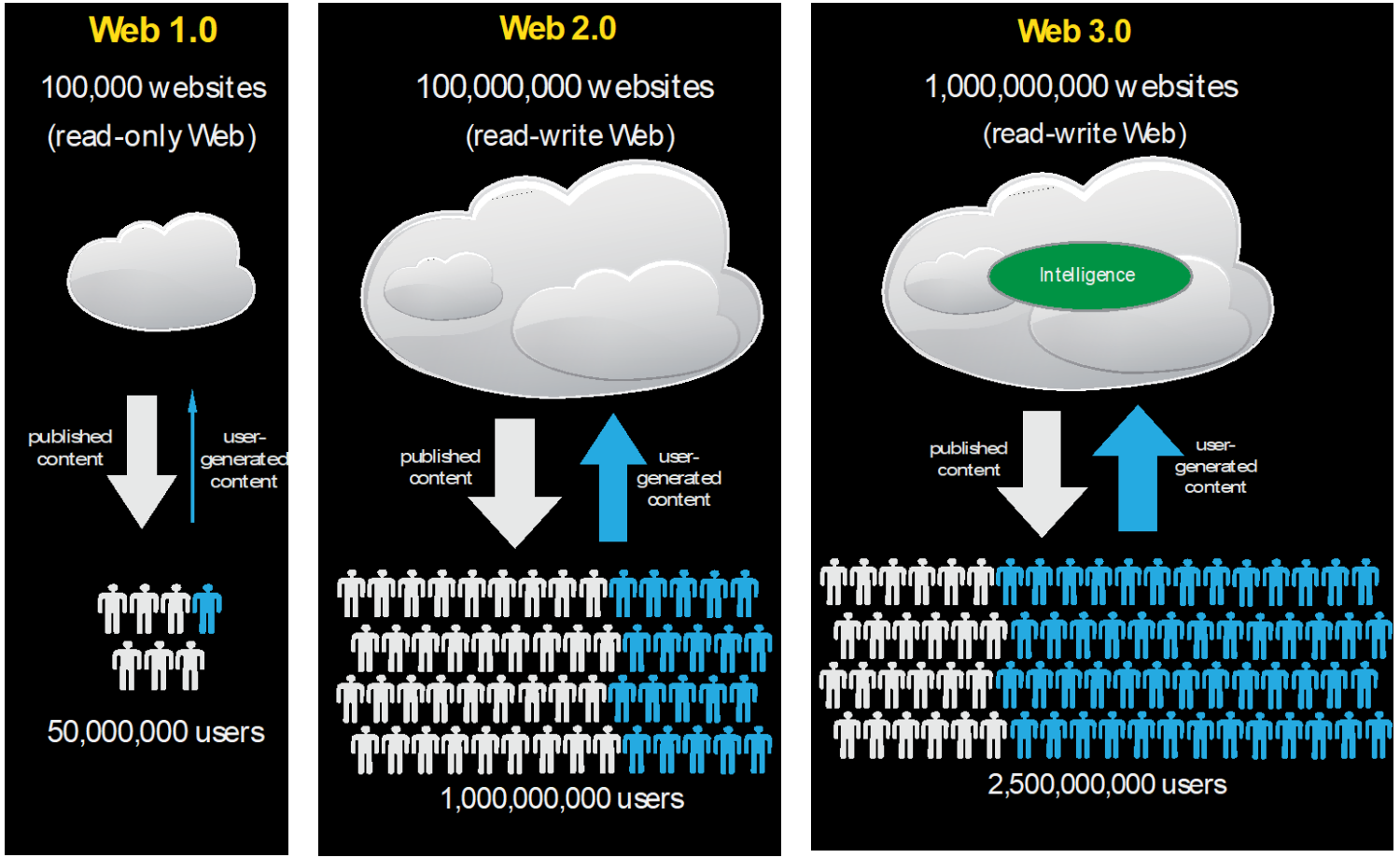
Classic Model
Internet → data transfer

The information is generated by a source and reaches one or more destinations

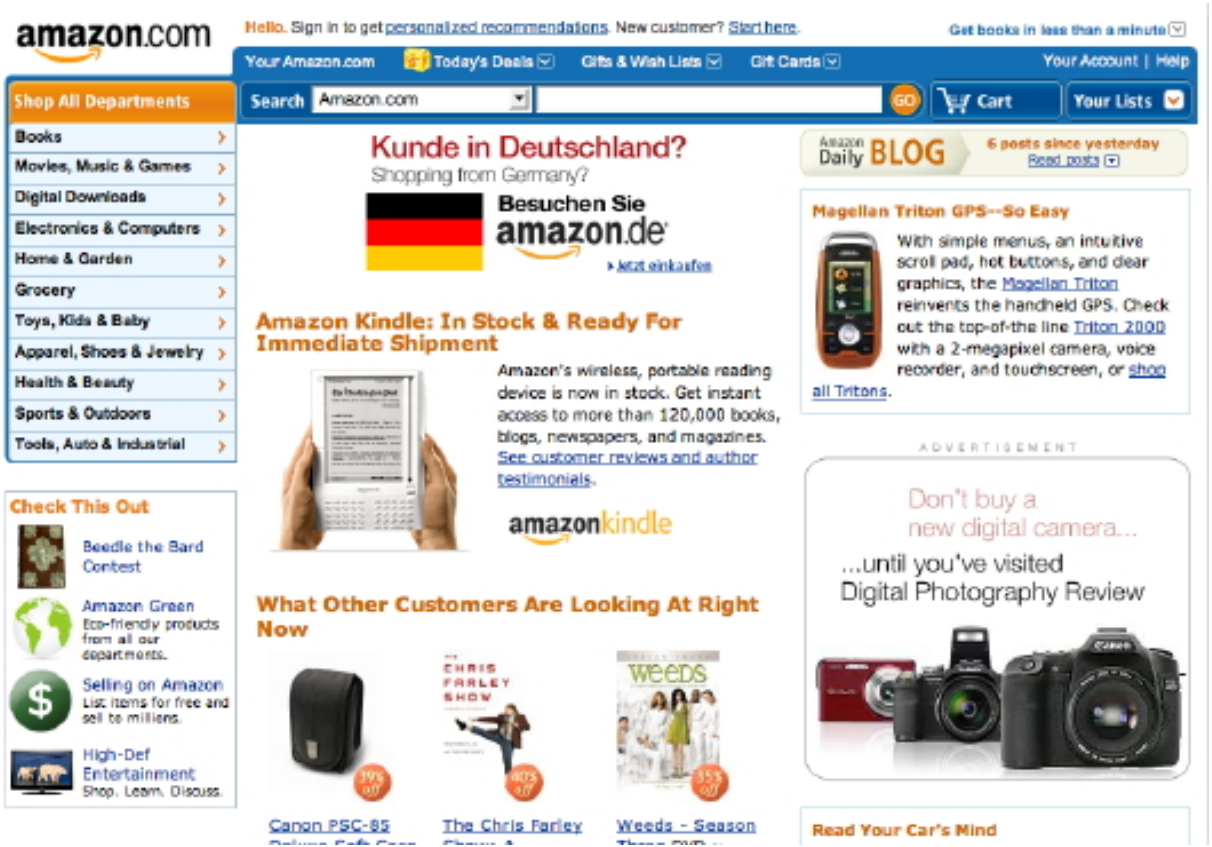
Current Model
Internet → data gathering

Information is extracted from the data

Web evolution

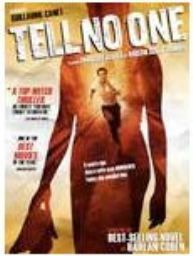


“web intelligence” examples



“web intelligence” examples

FOREIGN SUGGESTIONS (about 104) See all >



Tell No One

Because you enjoyed:
Memento
Syriana
Children of Men

Add

Not Interested

Let the Right One In

Because you enjoyed:
Seven Samurai
This Is Spinal Tap
The Big Lebowski

Add

Not Interested

I've Loved You So Long

Because you enjoyed:
The Queen
Syriana
Good Night, and Good Luck

Add

Not Interested

Downfall

Because you enjoyed:
Das Boot
The Killing Fields
Seven Samurai

Add

Not Interested

DRAMA SUGGESTIONS (about 82) See all >

The Wrestler

Because you enjoyed:
Sin City
Reservoir Dogs
The Big Lebowski

Add

Not Interested

The Visitor

Because you enjoyed:
Gandhi
The Motorcycle Diaries
The Queen

Add

Not Interested

Brick

Because you enjoyed:
The Big Lebowski
Rushmore
Fight Club

Add

Not Interested

The Pianist

Because you enjoyed:
Amadeus
The Killing Fields
Empire of the Sun

Add

Not Interested

“web intelligence” examples

Google

Noticias

Edición de España | Moderno

- Noticias destacadas
- Cartagena, Región de...
- Internacional
- España
- Economía
- Ciencia y Tecnología
- Espectáculos
- Deportes
- Salud
- De interés

Noticias destacadas

El Economista

Los republicanos se hacen con la mayoría en el Senado y ...

20minutos.es - hace 36 minutos

El Partido Republicano logró este martes la mayoría en el Senado de Estados Unidos al arrebatar al menos seis escaños a los demócratas en la Cámara Alta, haciéndose así con el control total del Congreso de la nación. Con las elecciones de este martes ...

Cobertura tiempo real

Mayoría republicana en Senado forzará negociaciones en EEUU
El Universal (Venezuela)

Los republicanos logran la mayor victoria de la era Obama EL PAÍS

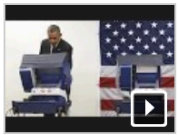
De Estados Unidos: Los descontentos entregan el Senado a republicanos El Nuevo Herald

Opinión: Republicanos arrebatan el Senado a demócratas El Financiero

De fondo: Obama se queda solo ante el Congreso republicano La Vanguardia

Relacionados
Partido Republicano »
Partido Demócrata »
Elecciones »

YouTube



euronews

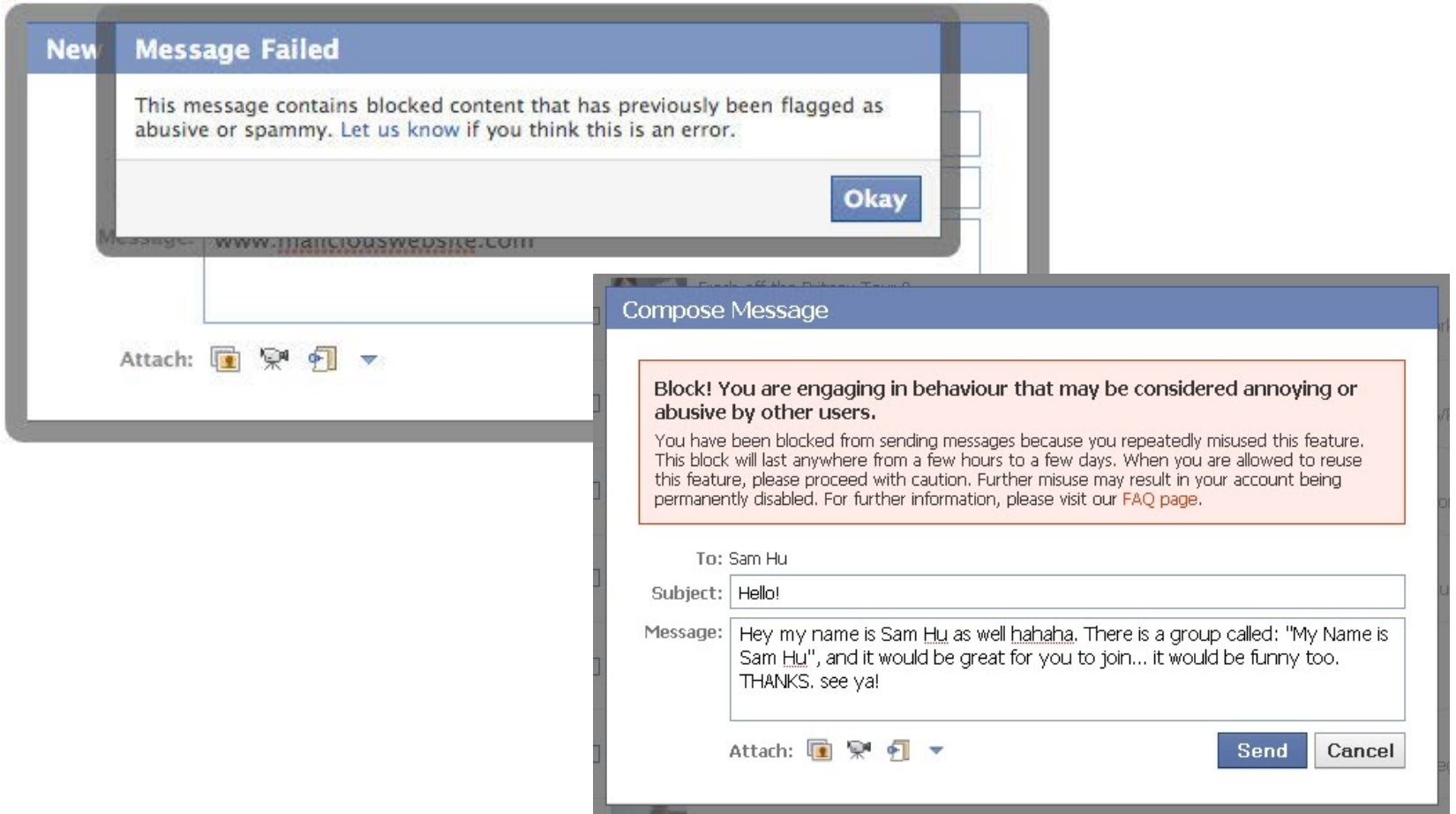
NTN24

InfoBAE.com

TeleCinco.es

ecodiario

“web intelligence” examples



Objectives of web intelligence algorithms

- Manage large volumes of data
- Extract relevant information from this data
- Add value to applications based on this information

Do all of the above automatically

How to attain these goals

Through automatic learning, known as Machine Learning
(in the field of Artificial Intelligence)

Arthur Samuel (1959). Machine Learning: Field of study that gives computers the ability to learn without being explicitly programmed.

Tom Mitchell (1998): It is said of a computer program that learns from an experience E with respect to a task T and a performance measure P, if its performance T, measured by P, improves with the experience E.

"It is said of a computer program that learns from an experience E with respect to a task T and a performance measure P, if its performance T, measured by P, improves with the experience E."

Suppose an email application observes which messages you mark as spam and, based on this, learns to better filter spam. What is the task T in this case?

- ❑ Classify emails as spam or non spam.
- ❑ Observe how the user marks emails as spam.
- ❑ The number (or fraction) of emails correctly marked as spam/non-spam.
- ❑ None of the above-This is not a machine learning problem.

Algorithms applicable to each example

Types of algorithms

We'll see two major types of algorithms:

Supervised learning:

- Regression
- Classification
- Recommendation

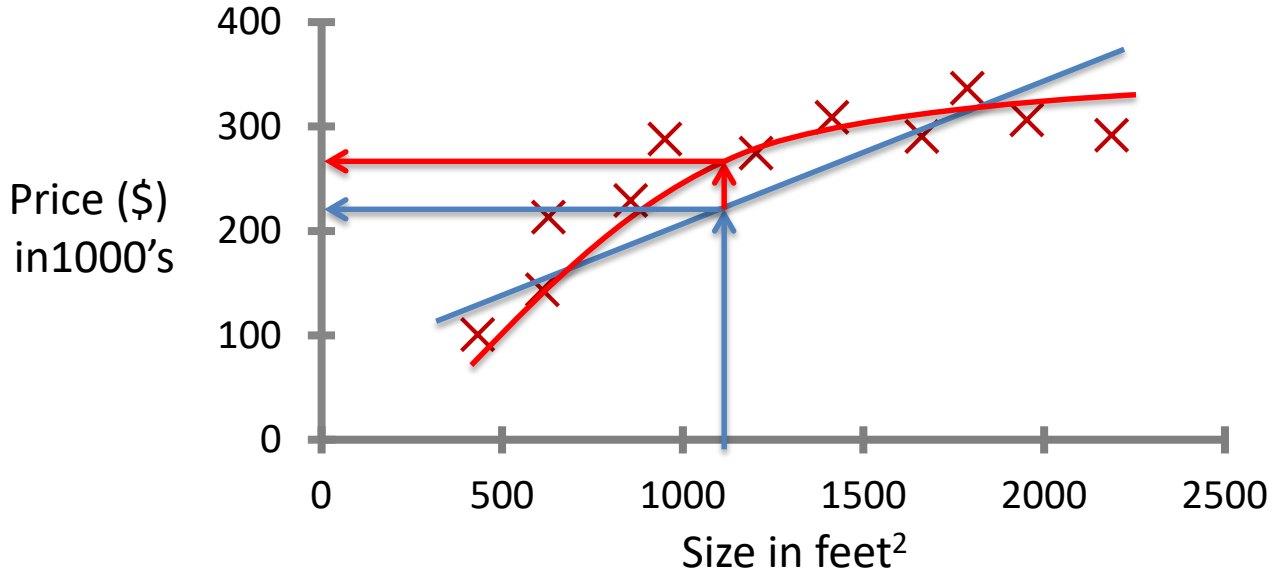
Unsupervised learning

- Clustering

There are other types: Reinforcement Learning, Online Learning, etc.

Supervised learning

Example: predicting housing prices



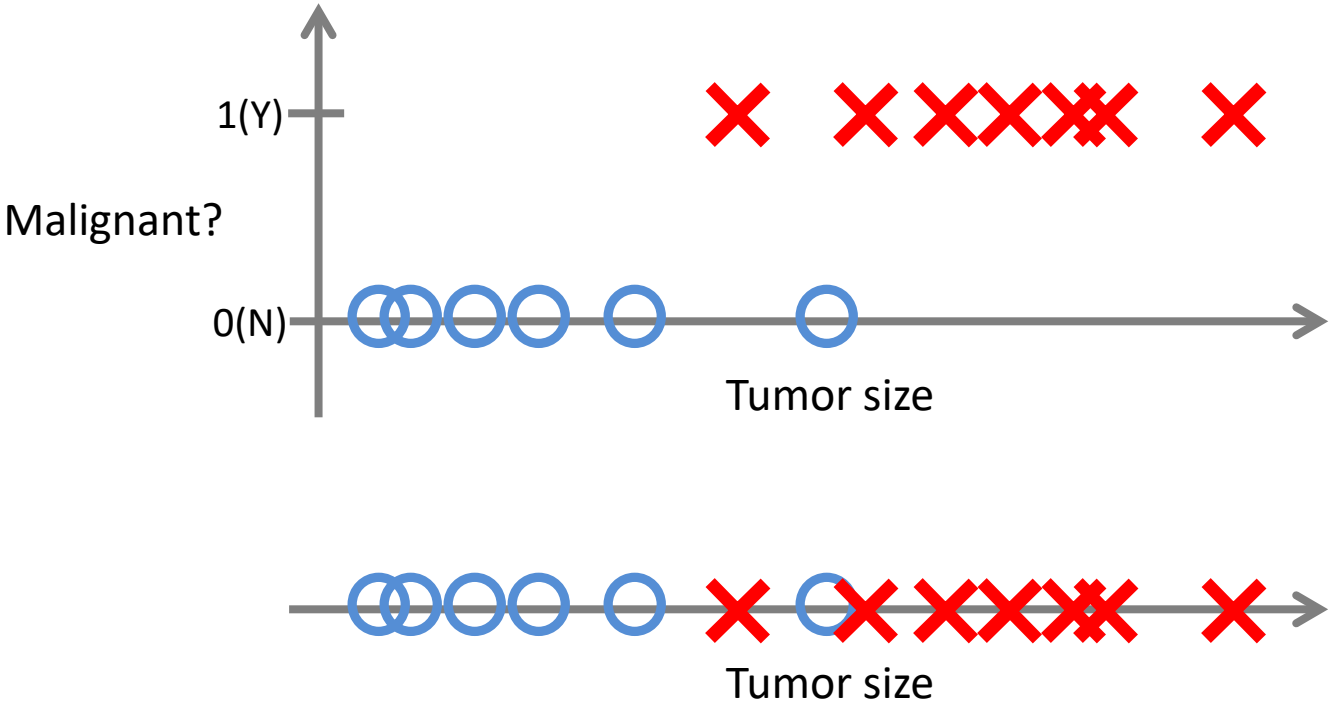
Supervised learning

"right answers" given

Regression: Predict continuous valued output (price)

Supervised learning

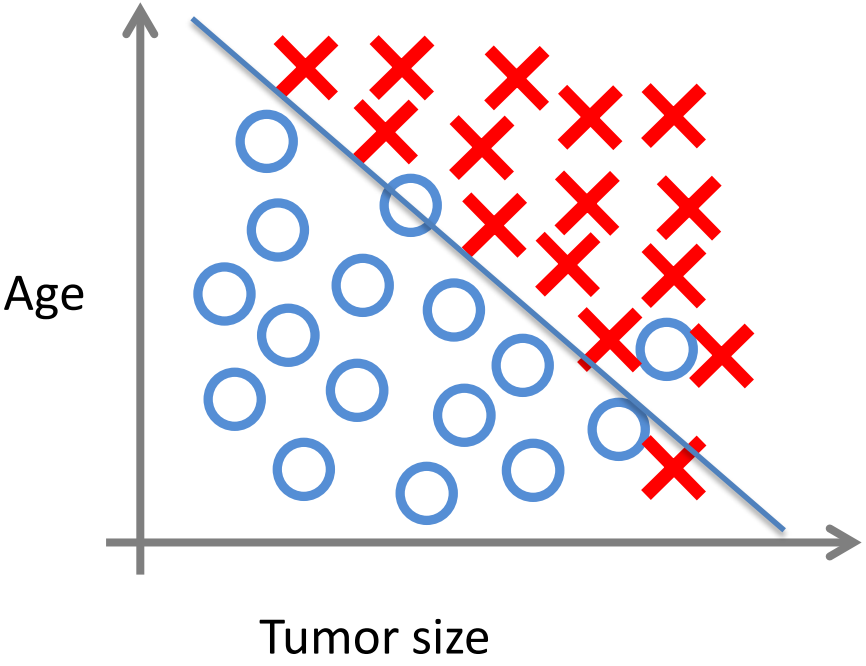
Cancer prediction (malignant, benign)



Classification

Discrete valued output (0 or 1)

Supervised learning



- Clump Thickness
- Uniformity of Cell Size
- Uniformity of Cell Shape

…

You work for a large company, and you want to develop learning algorithms that solve one of the following problems

Problem 1: You have a large inventory of identical items. You want to predict how many of these items will be sold over the next 3 months.
Problem 2: You'd like the software to examine individual customer accounts, and for each of them, decide whether the account has been hacked or not.

How should you address these problems, as a regression or as a classification?

Both as classification problems.

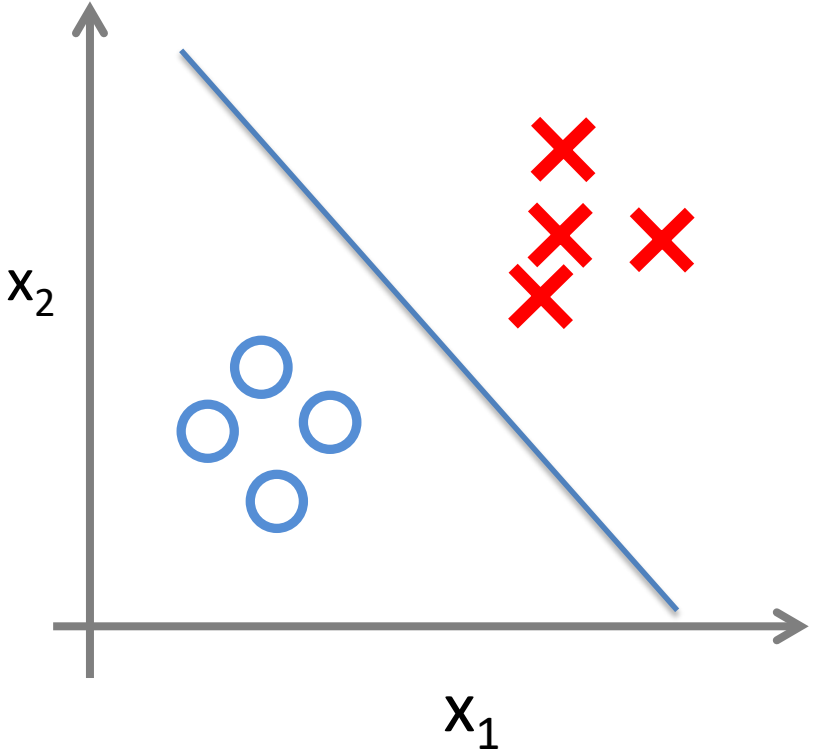
Problem 1 as classification, problem 2 as regression.

Problem 1 as regression, problem 2 as classification.

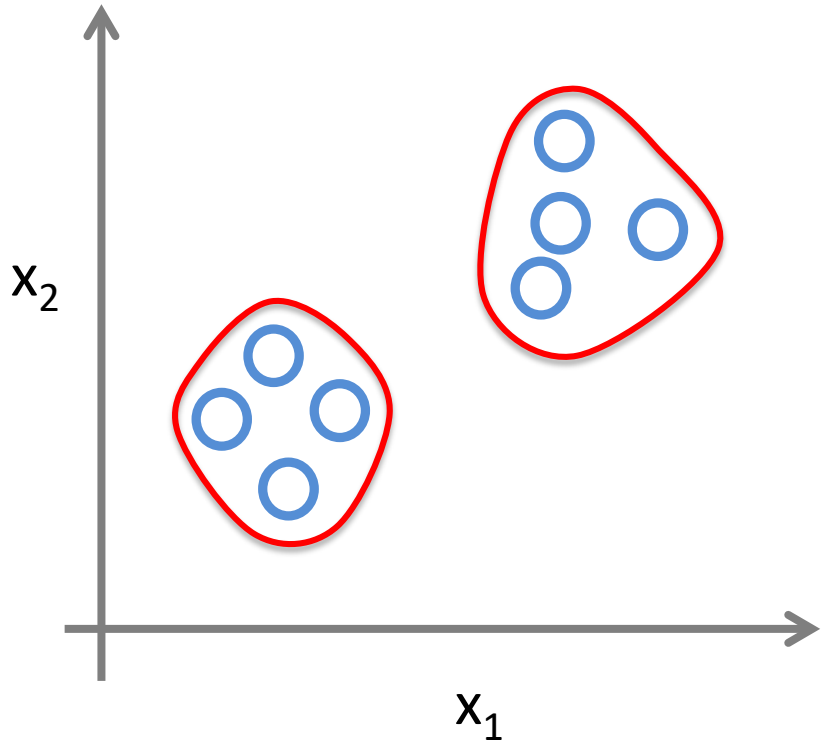
Both as regression problems.

Unsupervised learning

Supervised learning

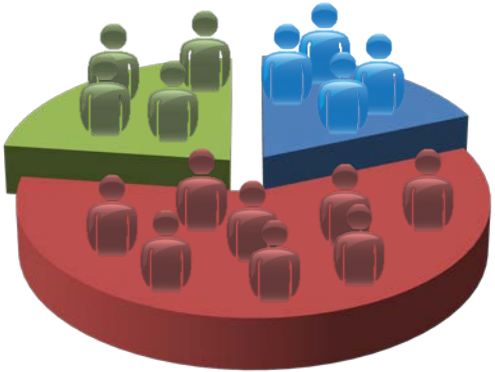


Unsupervised learning

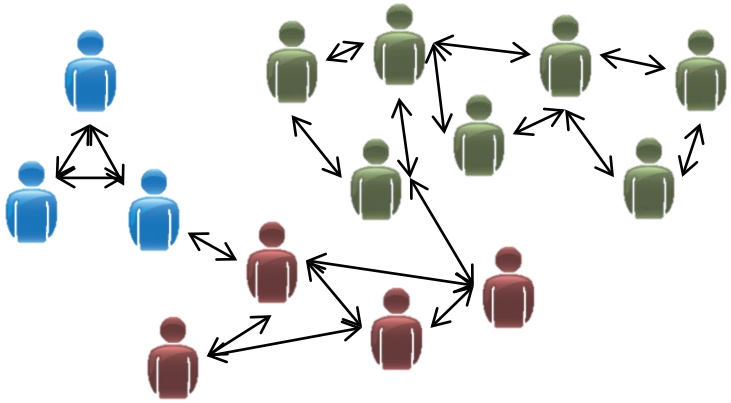


Unsupervised learning

Clustering



Market Segmentation



Social network analysis

Grouping related news together