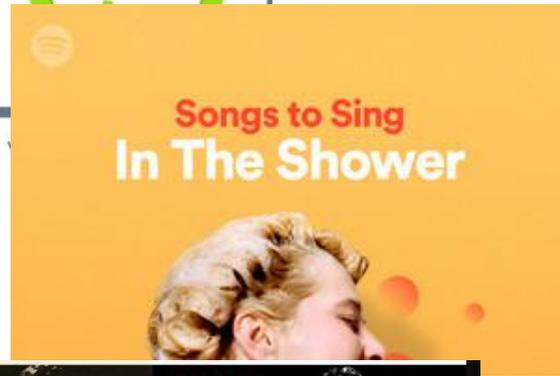


# **DAI BIG DATA AL MACHINE LEARNING**

**Gaia Rubera, Professore di Marketing, Bocconi University**  
**Direttore Laurea Magistrale in Data Science and Business Analytics**

# BIG DATA DA SMALL DATA

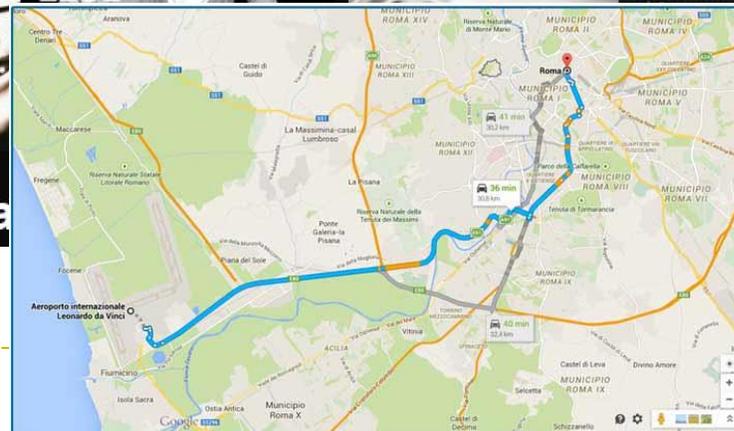


Playlist da rientro

MATRIMONI



Cucina



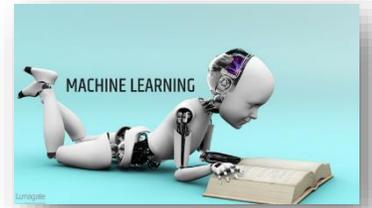
# CHI POSSIEDE I BIG DATA?



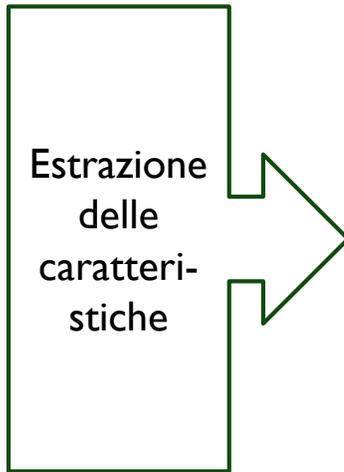
- ▶ Per molto tempo, solo le grandi imprese hanno posseduto «Big Data»
- ▶ Adesso, una quantità enorme di dati è accessibile a tutti (gratis)...
- ▶ Sui social networks!



# COME IMPARANO LE MACCHINE? UN SEMPLICE ESEMPIO



## Data



<b>Colore</b>
<b>Dimensione</b>
<b>Forma</b>

## Caratteristiche

	Pera	Pesca	Ciliegia
Colore	Rosso	Arancione	Rosso
Dimensione	Grande	Grande	Piccola
Forma	Ovale	Rotonda	Rotonda
	$\begin{bmatrix} 1 \\ 1 \\ 2 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$	$\begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}$

## Risposte corrette

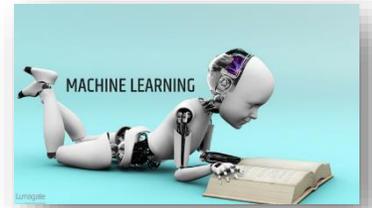
Pera

Pesca

Ciliegia



# COME IMPARANO LE MACCHINE? UN SEMPLICE ESEMPIO



## Data



Estrazione  
delle  
caratteri-  
stiche

Colore
Dimen- sione
Forma

## Caratteristiche

Pera	Pesca	Ciliegia
$\begin{bmatrix} 1 \\ 1 \\ 2 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$	$\begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}$



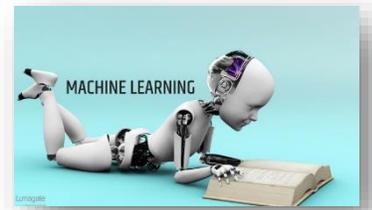
## Risposte corrette

Pera  
Pesca  
Ciliegia



# DALL'IMPARARE AL PREDIRE

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**Data**



**Predizione**

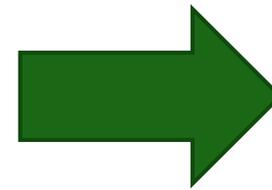
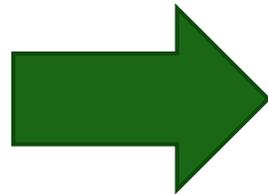


# DALL'IMPARARE AL PREDIRE

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**Data**



**Predizione**

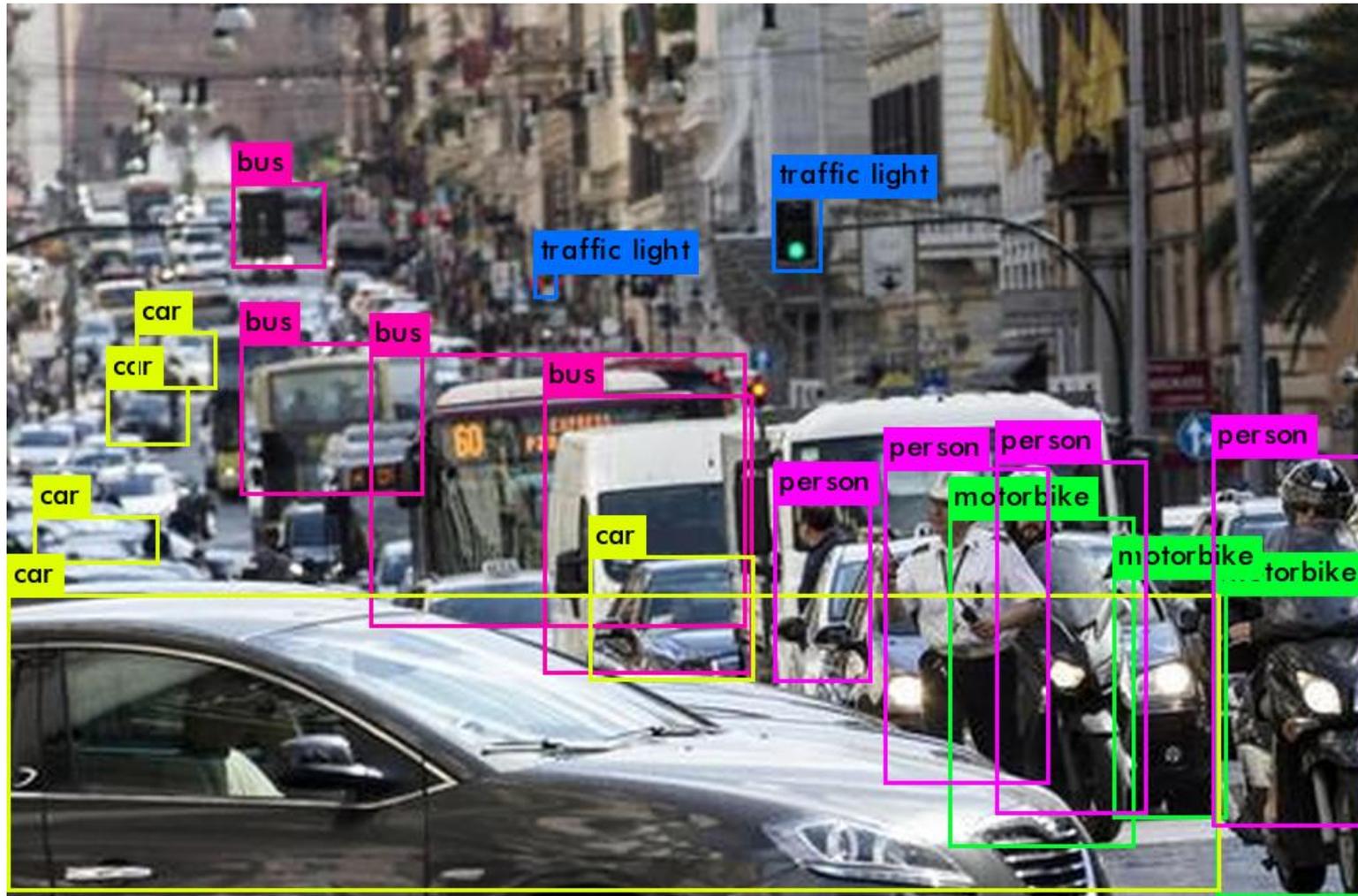
Pesca



# BIG DATA, SOCIAL NETWORKS E MACHINE LEARNING



# BIG DATA, SOCIAL NETWORKS E MACHINE LEARNING



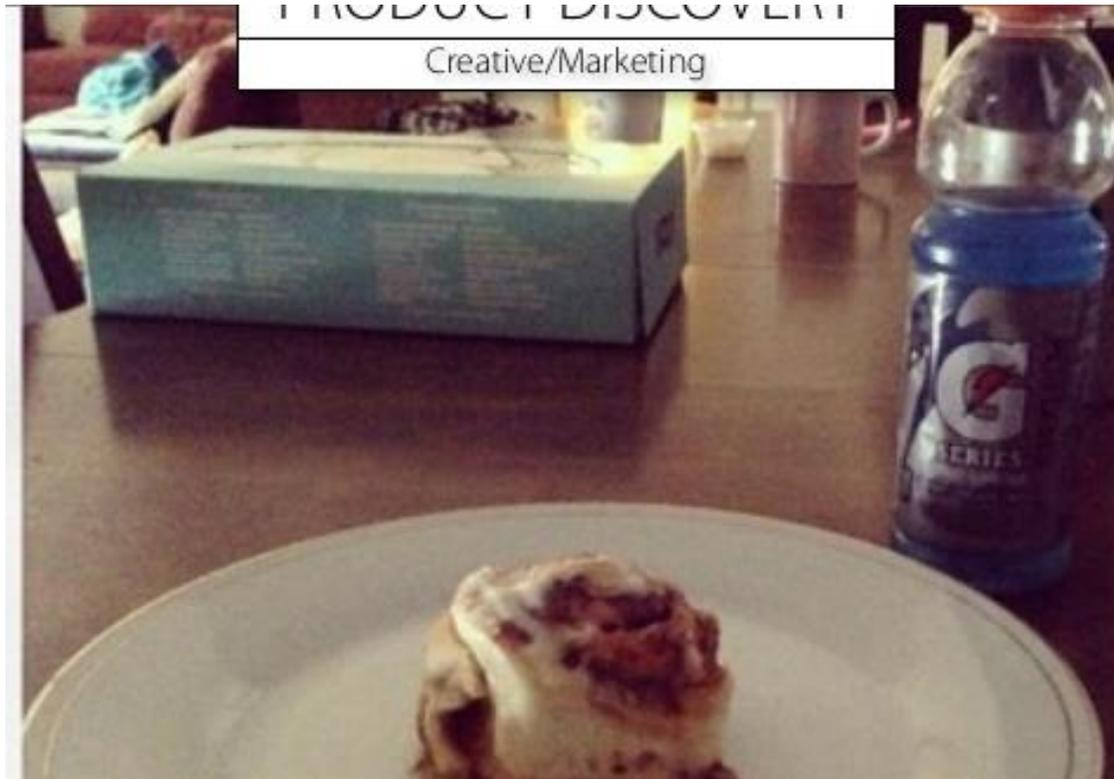
Predizioni in 0.89 seconds.

- semaforo: 85%
- semaforo: 56%
- bus: 98%
- bus: 88%
- bus: 78%
- bus: 56%
- motocicletta: 99%
- motocicletta : 66%
- motocicletta : 63%
- macchina: 100%
- macchina: 88%
- macchina: 56%
- macchina: 51%
- macchina: 50%
- persona: 98%
- persona: 91%
- persona: 82%
- person: 65%



# DAI CONSUMATORI ALLE IMPRESE

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# LA LIBERALIZZAZIONE DEL MACHINE LEARNING



bed bath  
goodnight tired  
curl sleepy  
sleep laying  
outta ready exhausted  
craw layin  
cuddle shower



# DON'T STOP ME NOW (I'm having such a good time)

