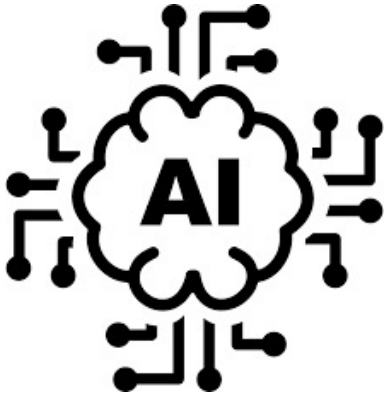
I SISTEMI DI RACCOMANDAZIONE NEL MONDO REALE

Luca Vassio
Politecnico di Torino
10 Marzo 2022
smartdata.polito.it

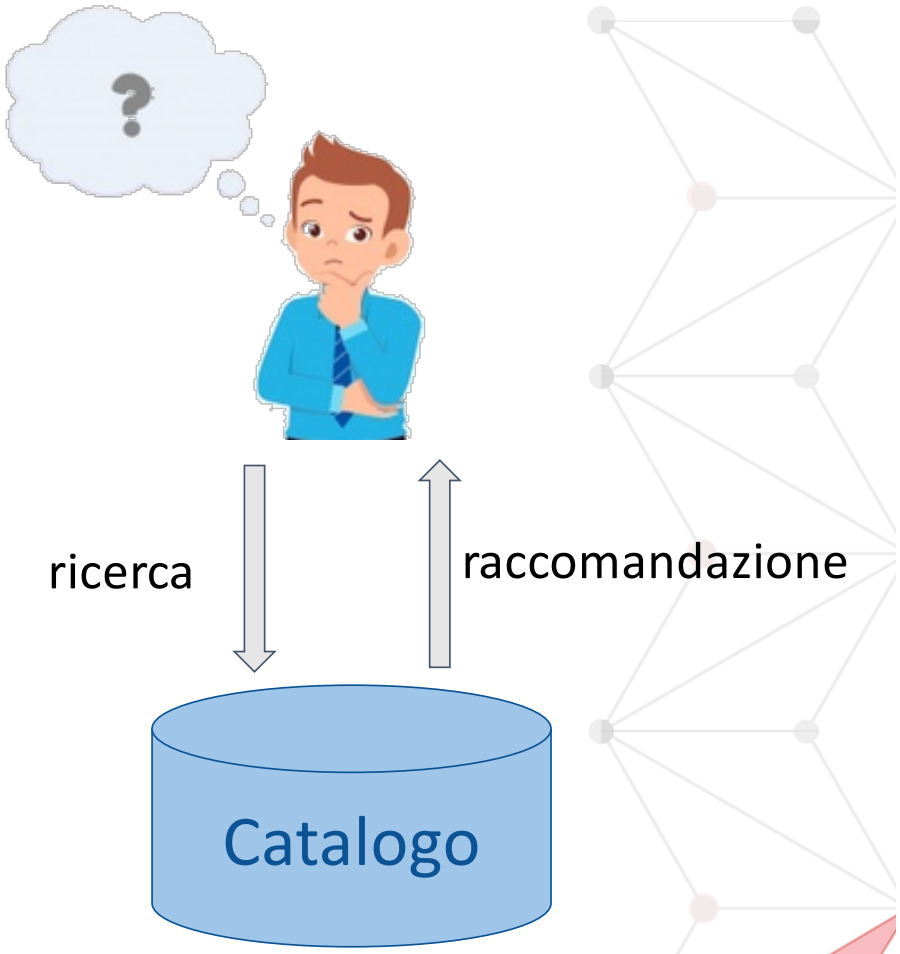
Big data e intelligenza artificiale



*Estrarre **valore** da grosse quantità di **dati***

Sistema di raccomandazione

*Uno strumento che **aiuta gli utenti** a cercare qualcosa che possa **interessargli** e li aiuta nelle loro decisioni mentre interagiscono con **grandi quantità di dati***



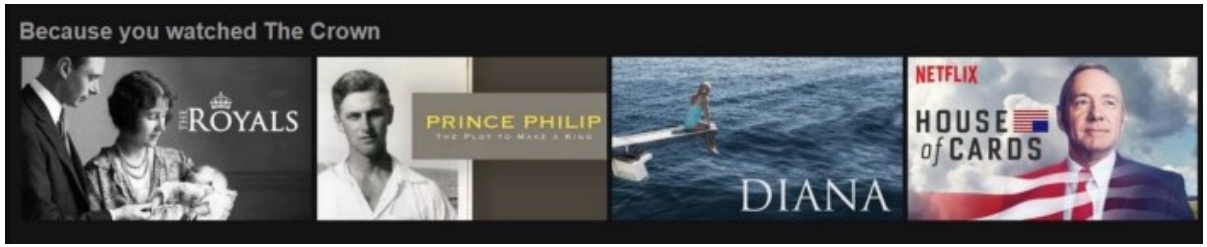
Sovraccarico informativo

Sistema di raccomandazione

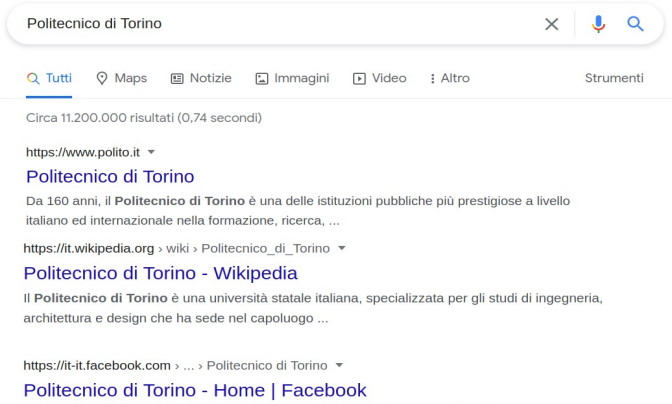
Politecnico di Torino
SmartData@PoliTO

amazon

NETFLIX

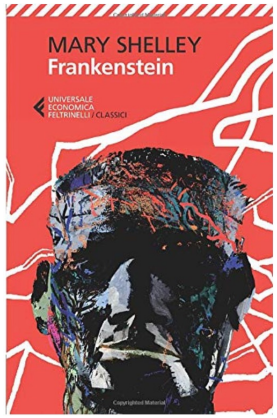


Google



Sistema basato sul contenuto

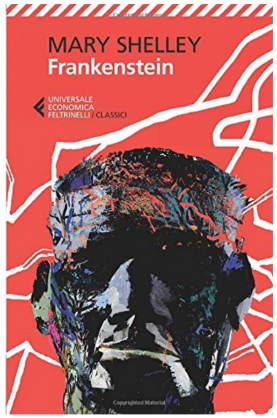
Similarità basata sul **contenuto**: proprietà e caratteristiche del volume

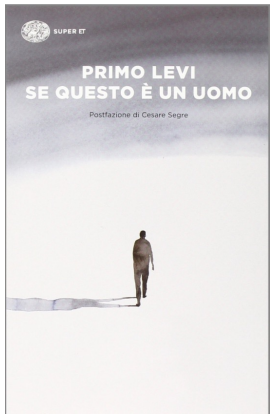


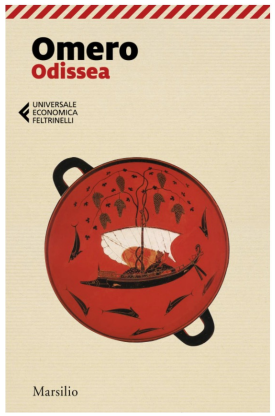
Anno di uscita	1918
Genere	Romanzo gotico
Lingua originale	Inglese
Lunghezza	313 pagine
Elementi di fantasia?	Si

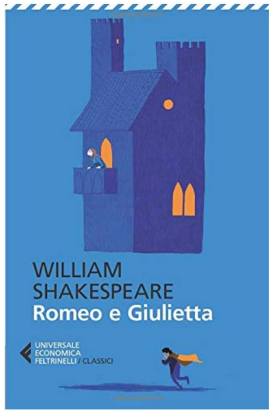
Sistema basato sul contenuto

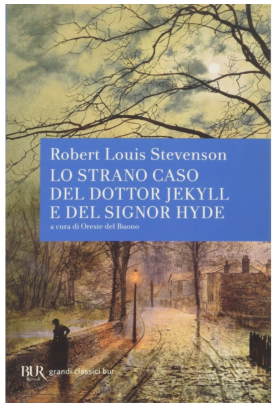
Similarità basata sul **contenuto**: proprietà e caratteristiche del volume

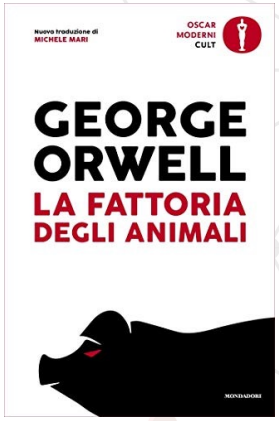








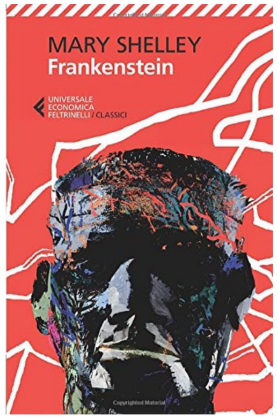


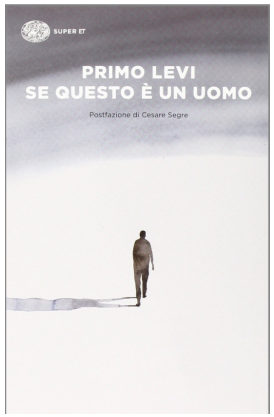


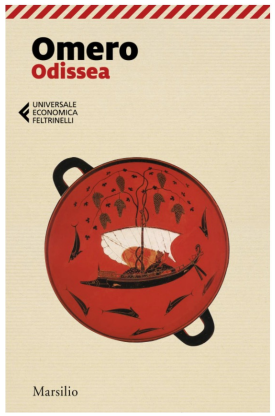
Anno di uscita	1918	1947	VIII secolo a.C.	1594	1886	1945
Genere	Romanzo gotico	Memorialistico	Poema epico	Tragedia	Romanzo gotico	Romanzo allegorico
Lingua originale	Inglese	Italiano	Greco	Inglese	Inglese	Inglese
Lunghezza	313 pagine	214 pagine	460 pagine	288 pagine	138 pagine	141 pagine
Elementi di fantasia?	Si	No	Si	No	Sì	Si

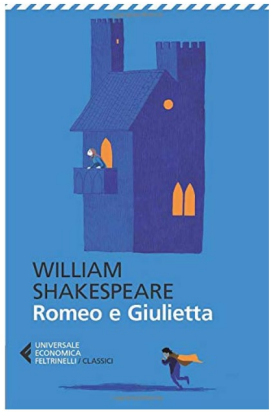
Sistema basato sul contenuto

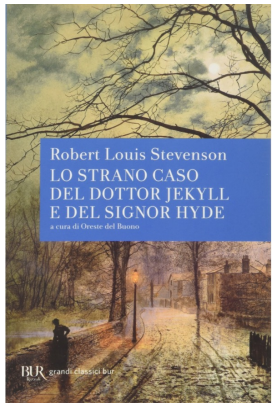
Similarità basata sul **contenuto**: proprietà e caratteristiche del volume

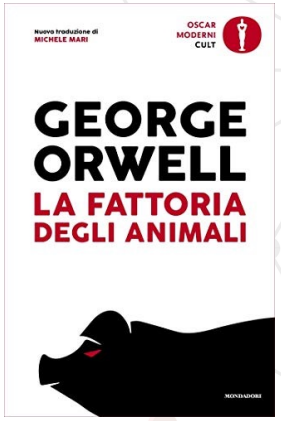








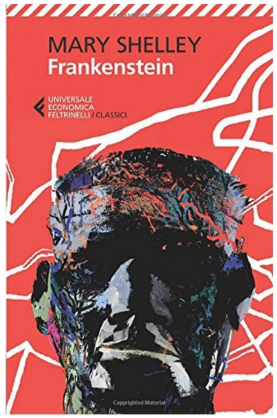


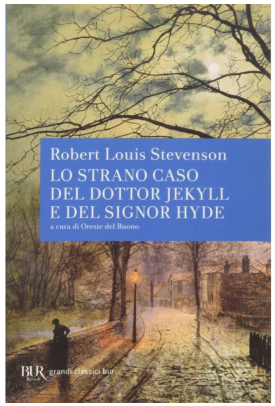


Anno di uscita	1918	1947	VIII secolo a.C.	1594	1886	1945
Genere	Romanzo gotico	Memorialistico	Poema epico	Tragedia	Romanzo gotico	Romanzo allegorico
Lingua originale	Inglese	Italiano	Greco	Inglese	Inglese	Inglese
Lunghezza	313 pagine	264 pagine	460 pagine	288 pagine	138 pagine	141 pagine
Elementi di fantasia?	Si	No	Si	No	Sì	Sì

Sistema basato sul contenuto

Similarità basata sul **contenuto**: proprietà e caratteristiche del volume



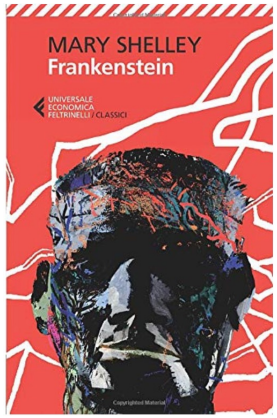


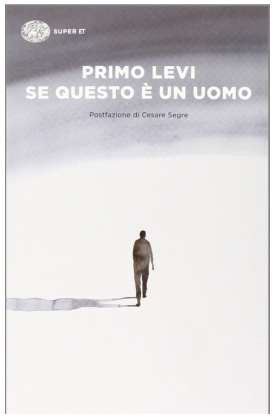
Anno di uscita	1918	1886
Genere	Romanzo gotico	Romanzo gotico
Lingua originale	Inglese	Inglese
Lunghezza	313 pagine	138 pagine
Elementi di fantasia?	Si	Sì

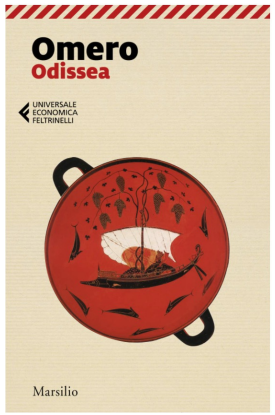
Sistema collaborativo

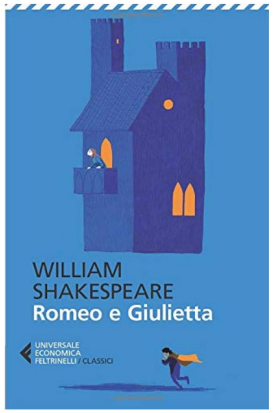
Politecnico di Torino
SmartData@PoliTO

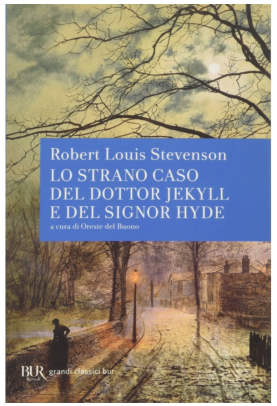
Cosa interessa alle **persone** simili a me?

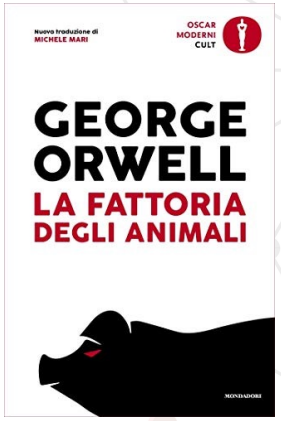










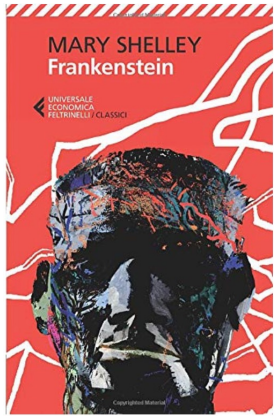


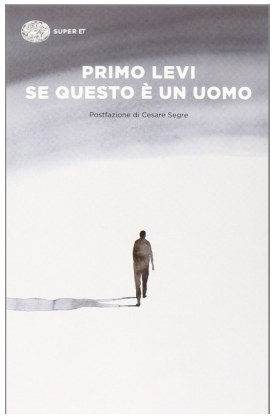
Bianca	Sì	Si	No	No	No	No
Muhammad	Si	No	Si	No	No	Sì
Jìng	No	Sì	No	No	Sì	No

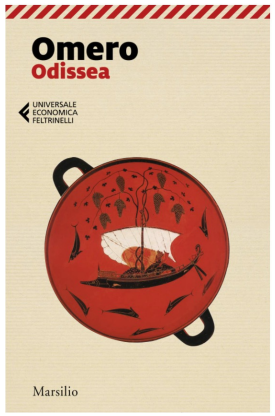
Sistema collaborativo

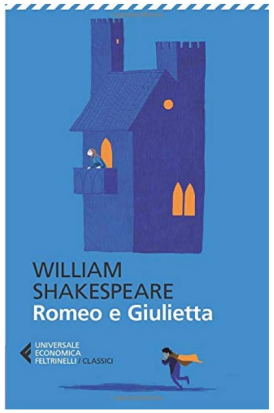
Politecnico di Torino
SmartData@PoliTO

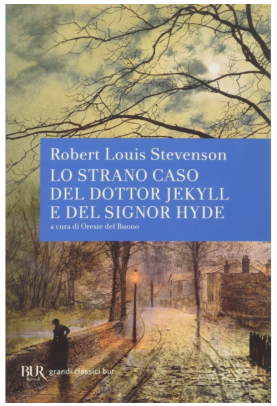
Cosa interessa alle **persone** simili a me?

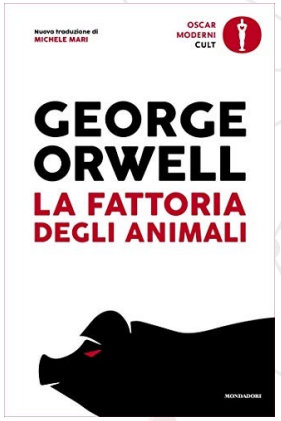










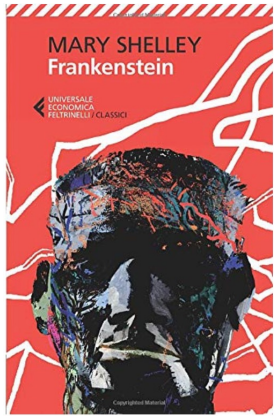


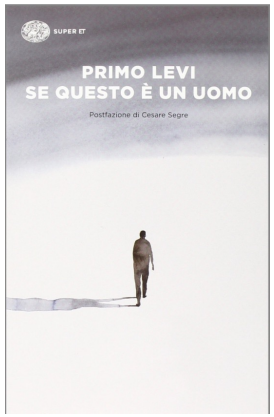
Bianca	Sì	Si	No	No	No	No
Muhammad	Si	No	Si	No	No	Sì
Jìng	No	Sì	No	No	Sì	No
Luca	*Si*	*No*	*Si*	*No*	*?*	*?*

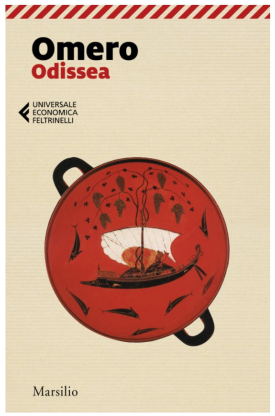
Sistema collaborativo

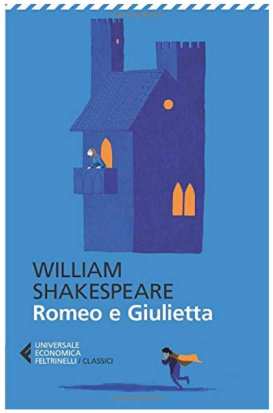
Politecnico di Torino
SmartData@PoliTO

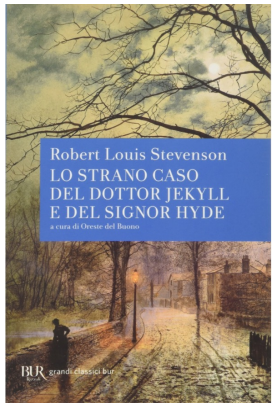
Cosa interessa alle **persone** simili a me?

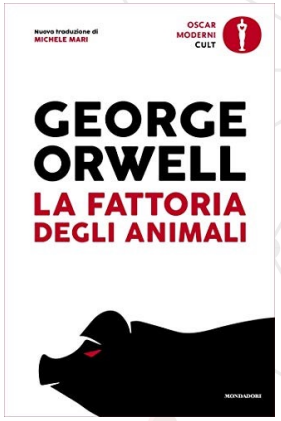










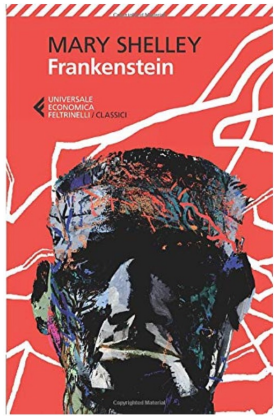


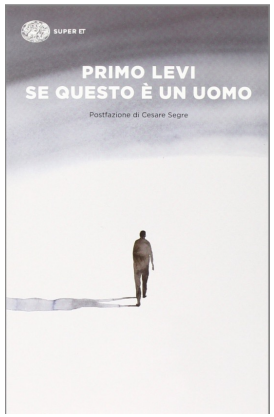
Bianca	Sì	Si	No	No	No	No
Muhammad	Sì	No	Sì	No	No	Sì
Jìng	No	Sì	No	No	Sì	No
Luca	*Sì*	*No*	*Sì*	*No*	*?*	*?*

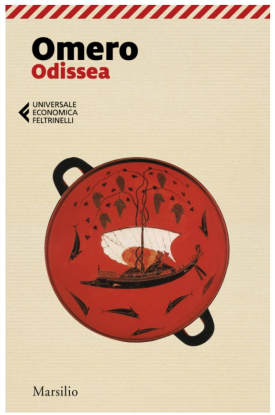
Sistema collaborativo

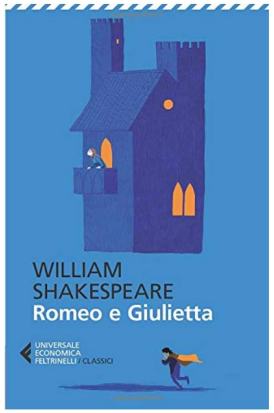
Politecnico di Torino
SmartData@PoliTO

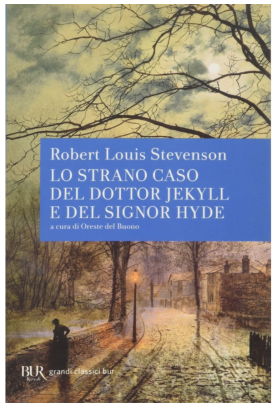
Cosa interessa alle **persone** simili a me?

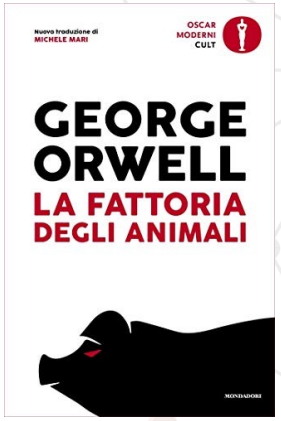












Muhammad	Sì	No	Sì	No	No	Sì
Luca	*Sì*	*No*	*Sì*	*No*	*?*	*?*

Dati

Biblioteche Civiche Torinesi

+

anobii

+

Argomenti di tendenza

Dati

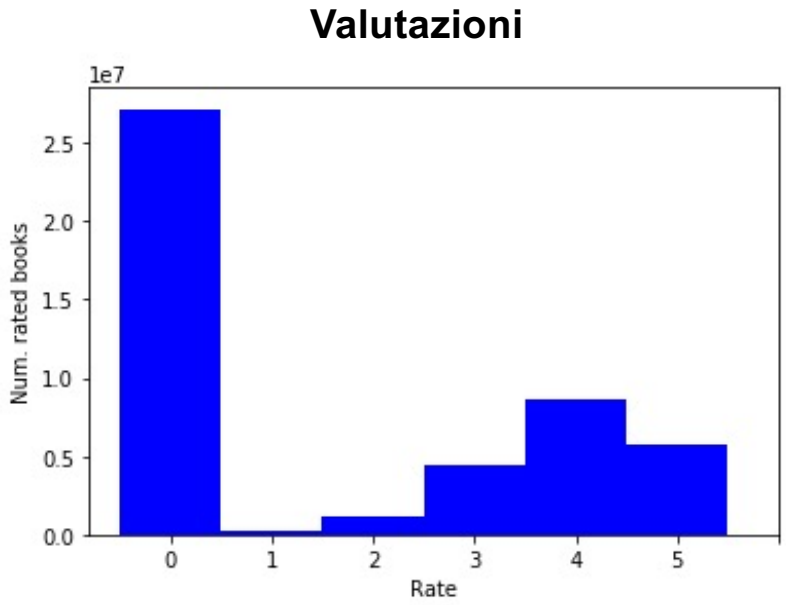
- Utenti: **150 mila**
- Volumi: **800 mila**
- Prestiti: **6 milioni**

Volumi più prestati

Topolino / Walt Disney productions	12878
Speak up : l'audiomensile per il tuo inglese	9359
Gente : settimanale di politica, attualità e c...	7415
Tex	5807
Panorama	5727
Oggi	5111
Internazionale : ogni settimana il meglio dei ...	4858
Dylan Dog : l'indagatore dell'incubo	4480
Grazia : la rivista della donna italiana	4178
Paperino / Walt Disney	3788

Dati

- Utenti: **500 mila**
- Libri: **3 milioni**
- Valutazioni: **50 milioni**



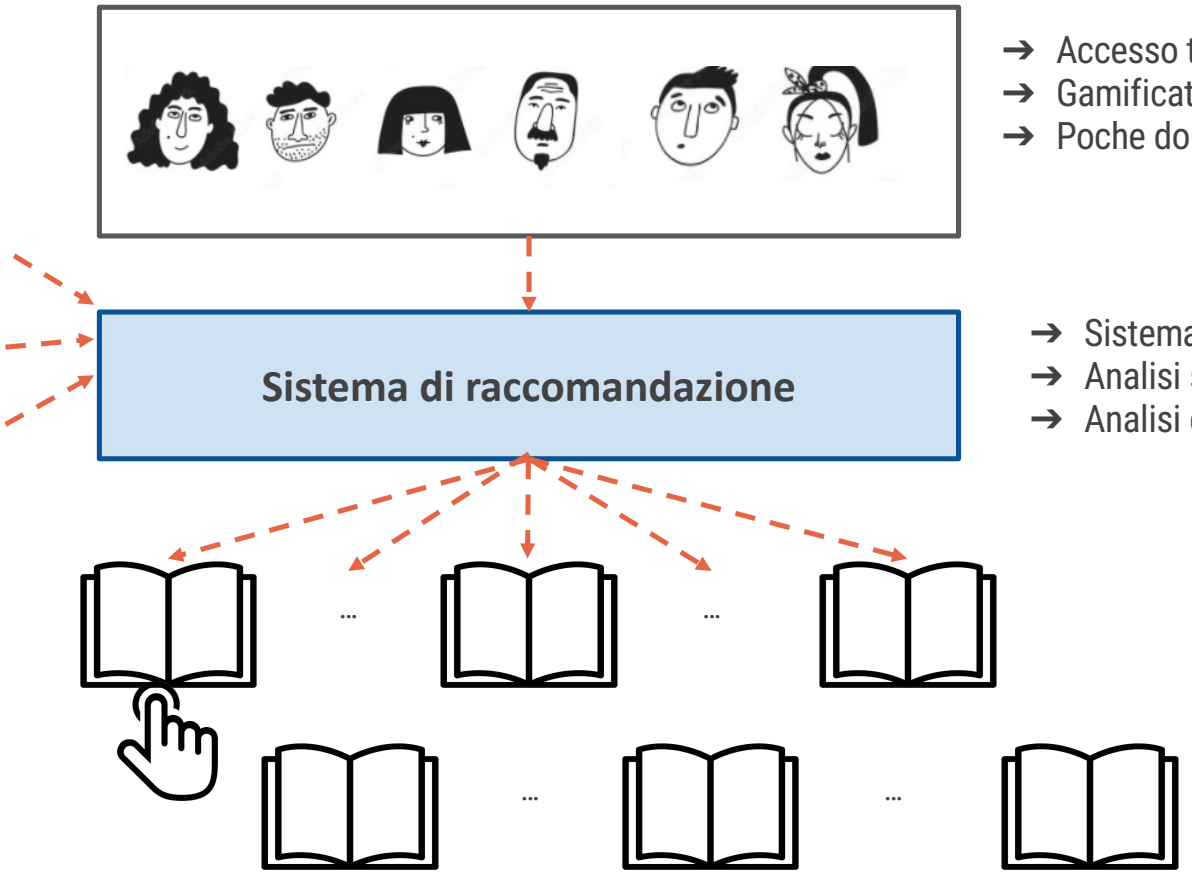
Garbage in
Garbage OUT

Reading Machine

Biblioteche Civiche Torinesi

anobii

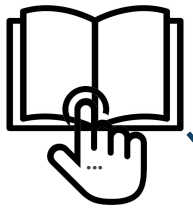
Argomenti di tendenza

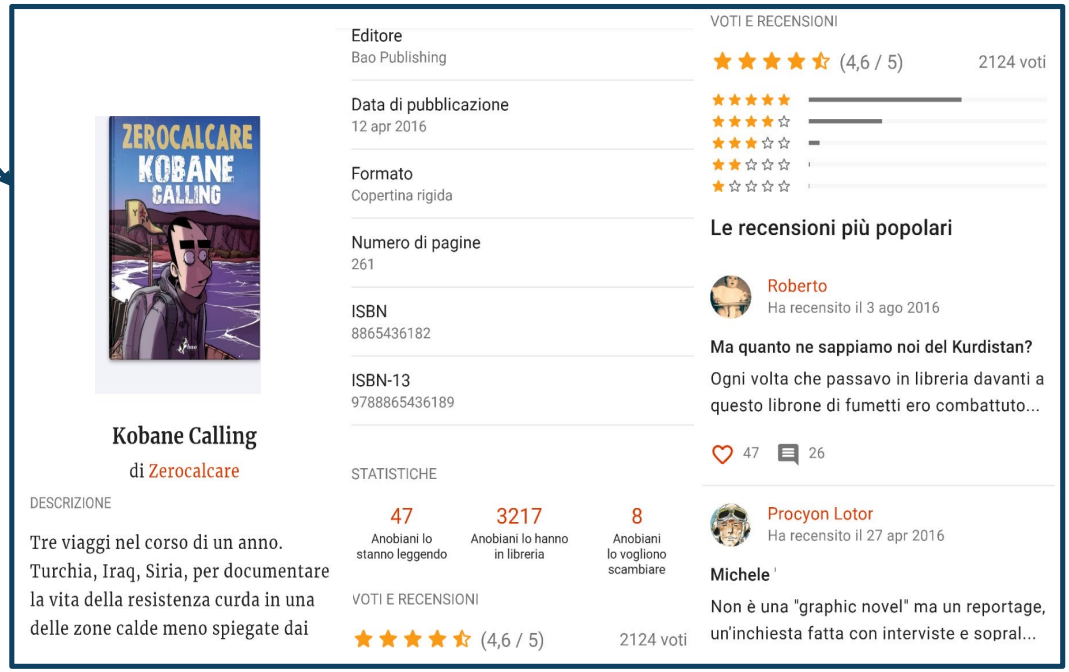


- Accesso tramite credenziali biblioteche
- Gamification
- Poche domande su umore, interessi, ecc.

- Sistema ibrido
- Analisi serie temporale dinamica
- Analisi del sentimento/opinioni

Cosa mostrare?





Conclusioni e sfide

Viviamo nell'**era dei dati**

- Ottenere i dati è sempre più **facile**
- Estrarre valore dai dati è ancora una **sfida**
- Non bisogna fidarsi ciecamente degli strumenti

Sistemi di raccomandazione applicati al mondo delle **biblioteche** hanno potenzialità inesplorate e grosse sfide:

- **Valutare i risultati** della raccomandazione
- Valutare **pregiudizi etici**