





Team: Junru Li, Yimin Ma, Huize Yan, Dianwen Jin

## **Project Goal**

**TOPICS** 

500+ 3000+ **TALKS** 





What if I want to watch more similar TED talks but don't want to waste time on searching?



Enter a TED talk name you like



Give other recommendations

## **Data Source**

#### Method 1:

Download from Kaggle: <a href="http://www.kaggle.com">http://www.kaggle.com</a>

#### **Method 2:**

Use spider to collect data from web.

	name	title	description	main_speaker
0	Ken Robinson: Do schools kill creativity?	Do schools kill creativity?	Sir Ken Robinson makes an entertaining and pro	Ken Robinson
1	Al Gore: Averting the climate crisis	Averting the climate crisis	With the same humor and humanity he exuded in	Al Gore

## Method

**Select one favorite TED talk** Create a criteria to define similarity of two talks List N talks closest to like **Select 5 top talks from the list** based on a score **Finish recommendation** 

- Make a coefficient matrix containing 0 or 1, depending on the correspondence between the significance of column j and the content of TED talk i
- Rows: TED titles, Columns: tags, main speakers & occupations

## Method

**Select one favorite TED talk** 

Create a criteria to define similarity of two talks

List N talks closest to like

Select 5 top talks from the list based on a score

Finish recommendation

- 3 criteria in the score:
   "rating" "number of views" "year of release"
- Score = Rating \* φ(# of views) \* φ(year of release), where φ is a gaussian function:

$$\varphi \propto \exp\left(-\frac{(x-c)^2}{2\sigma^2}\right)$$

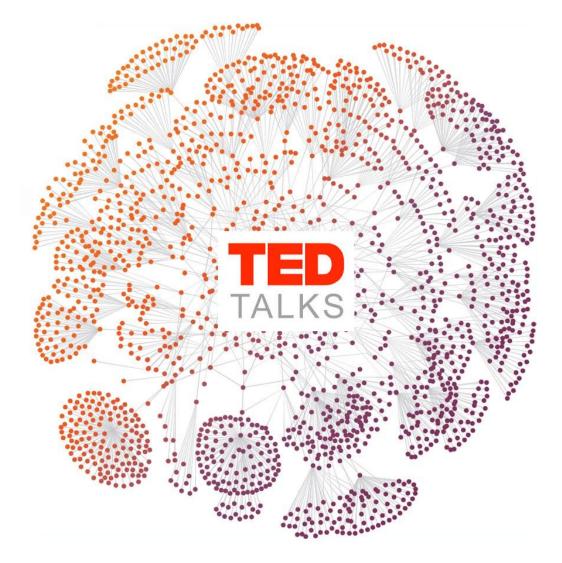
# **Future Improvement**

- Our app can predict recommendation not only from a TED talk name, but also from "Topic", "Speaker".
- Test with other video websites like Bilibili,
   Webcast platform



# Reference

- https://www.kaggle.com/rounakbanik/ted-talks
- https://www.kaggle.com/fabiendaniel/film-recommendation-engine
- Python Machine Learning Blueprints





# Thank You

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