

# Sistema de Recomendación: Codewars

Alberto García Cobo

# CONTENIDO



Descripción de Codewars  
Descripción del Dataset  
Data cleaning and wrangling  
Mayores retos  
Machine Learning  
Problemas  
Resultados



**Red social para  
programadores**

**Honor y Score**

**+20 lenguajes  
de programación  
TOP**

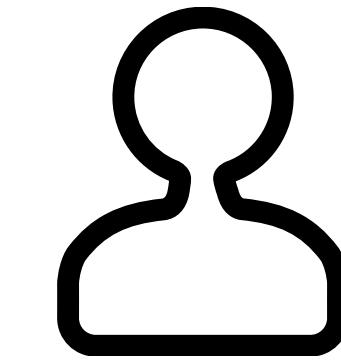
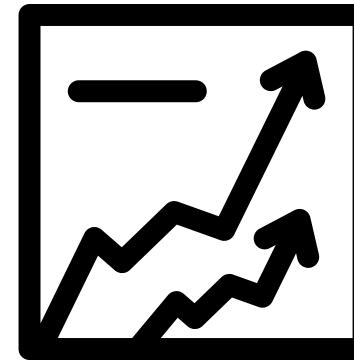
## | Descripción de Codewars

**Usuarios de  
Codewars**

**Web Scraping  
+ API requests**

**11500 Registros  
3 Iteraciones**

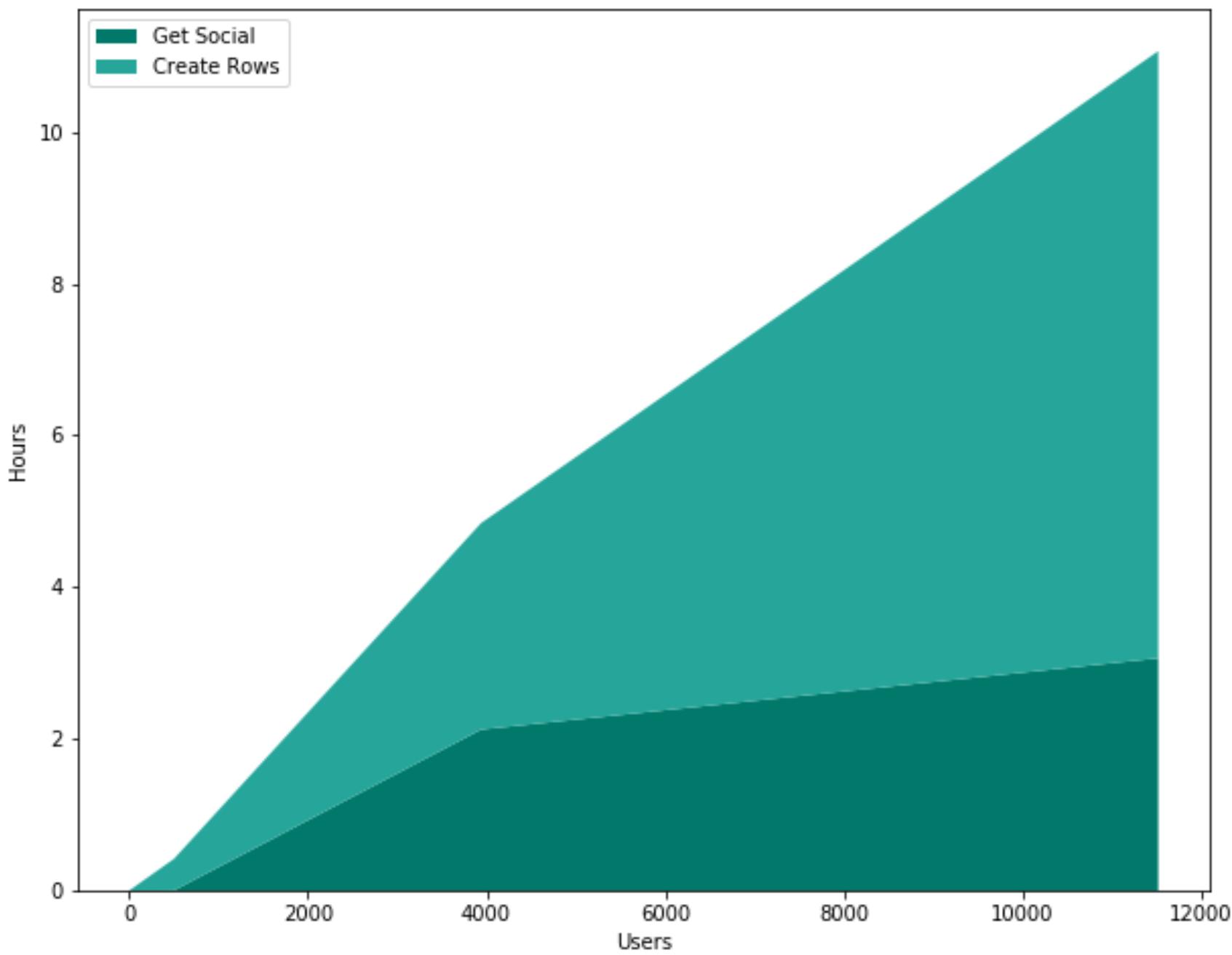
## || Descripción del Dataset



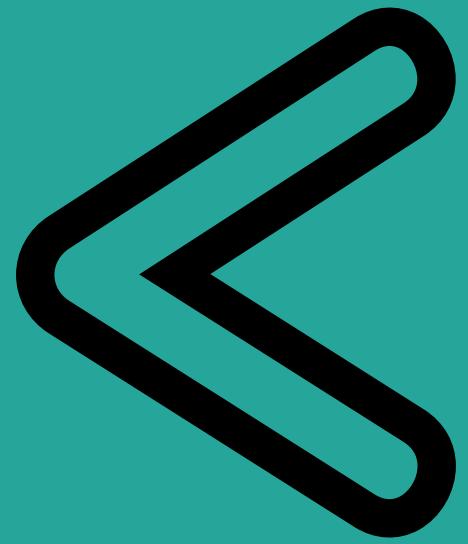
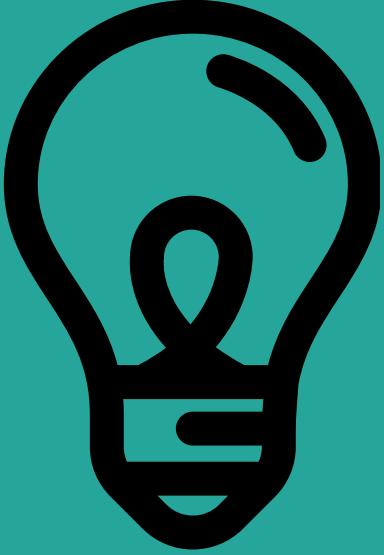
0.0+0.4 horas  
2.1+2.7 horas  
3.0+8.0 horas

500  
3939  
11500

Coste en Tiempo en cada diferente iteración



## Descripción del Dataset



"SEP 2018"  
"3,101"  
"JAVASCRIPT (5 KYU)"  
"3 (1 REPLIES)"

# | Data cleaning and wrangling

**Combinar Datos  
de la API y Web  
Scraping**

**Treemap:  
javascript +  
json ad hoc**

**Sistema de  
Recomendación  
Vectorial**

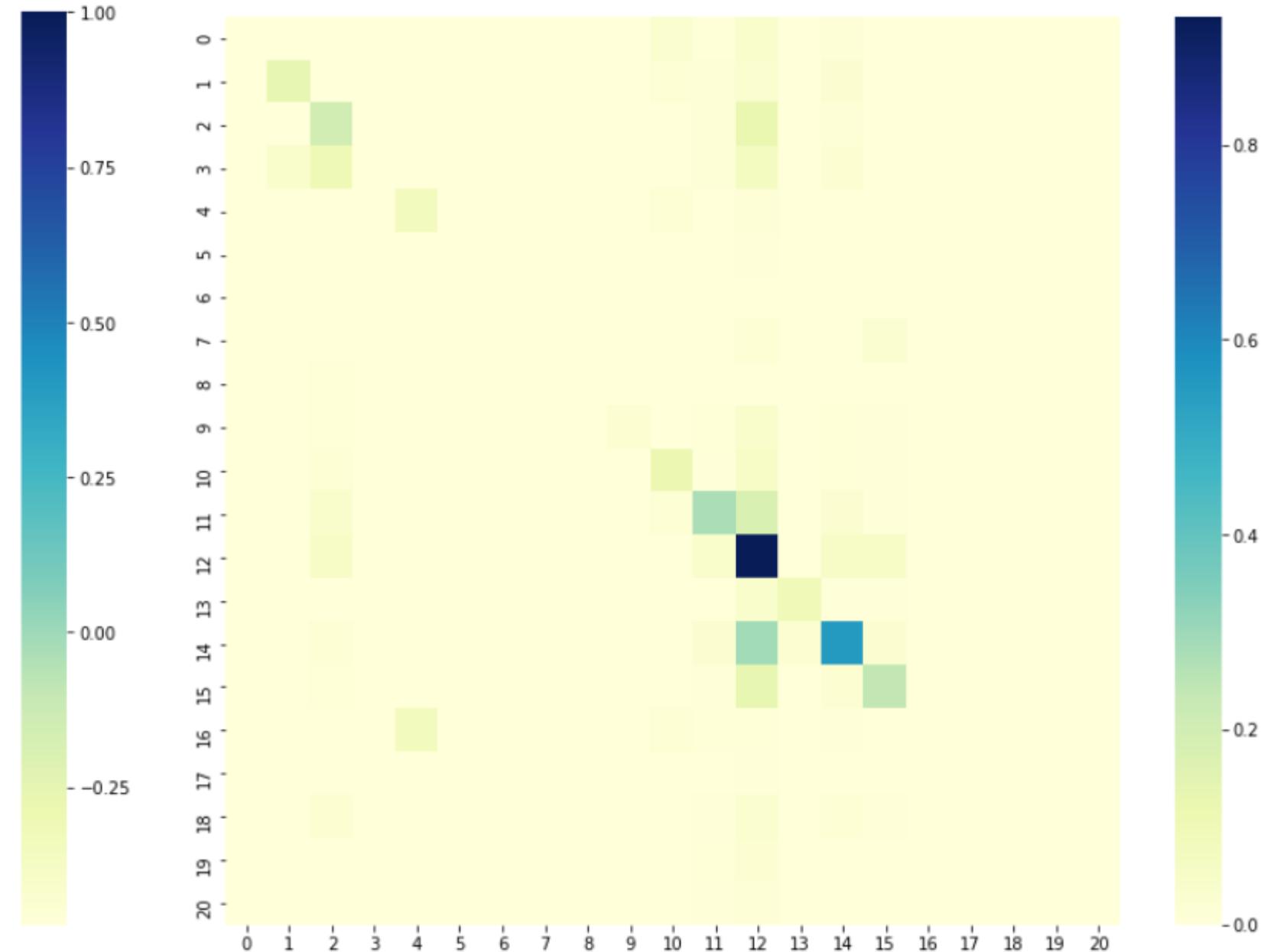
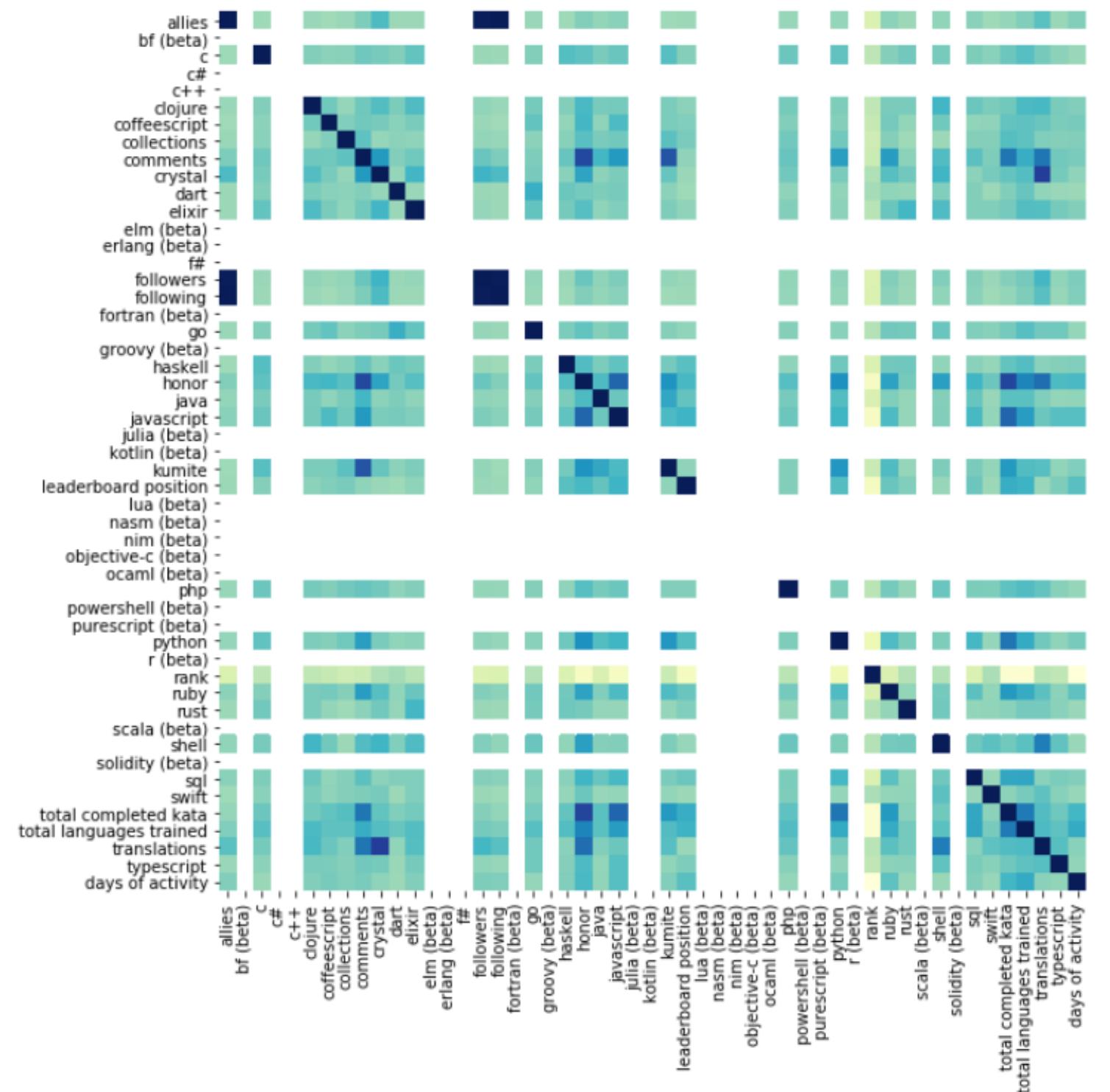
**| Mayores retos**

# | Machine Learning

**Correlación  
heatmap**

**Supervised  
Learning:  
score = 0.51**

**Unsupervised  
Learning**



# Correlation y confussion heatmap

# Problemas

**Tiempos de  
ETL**

**Web Scraping  
de una Web  
Dinámica**

**Creación  
de Grafos**

## **Javascript, la gran ganadora**

## **Sistema de recomendación por distancia euclídea**

## **Grafos de relaciones**

# **Resultados**



| d3 Treemap

# Buscamos expertos en: python, java y javascript



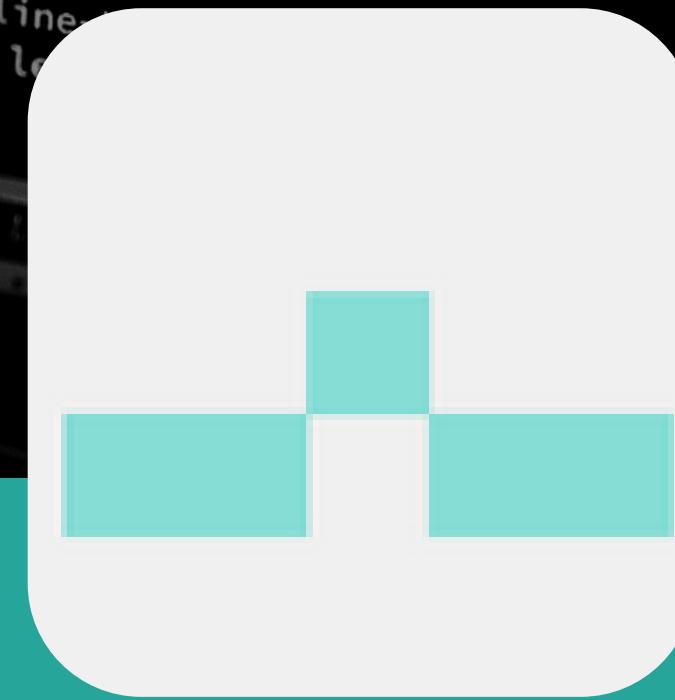
**Blind4Basics**

<https://github.com/Blind4Basics>



**Bubbler**

<https://github.com/Bubbler-4>



**Lyapunov**

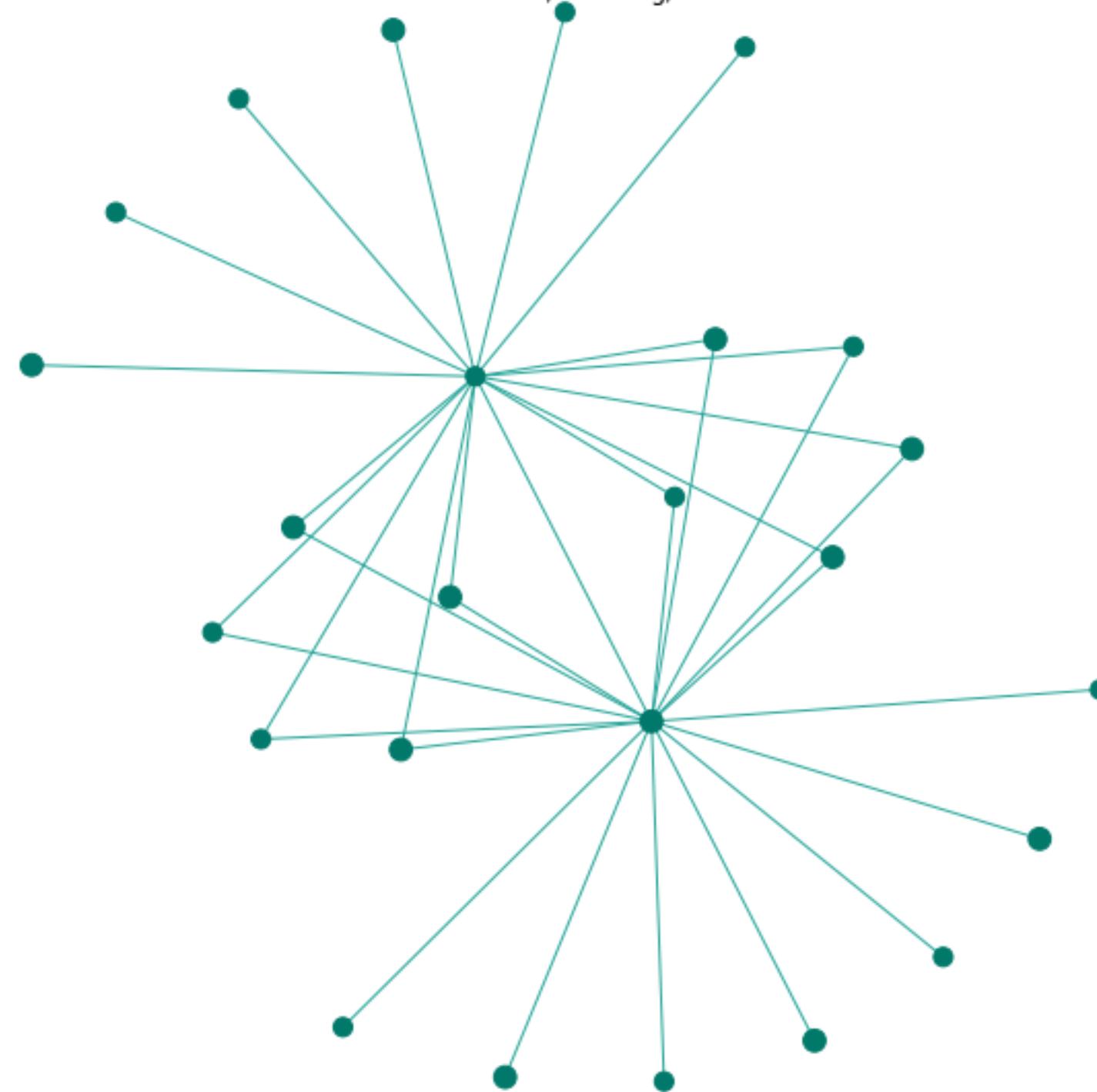
<https://github.com/Lyapunov>

| **Sistema de recomendación**

| C   | Javascript | Python | Java | R   | Ruby |
|-----|------------|--------|------|-----|------|
| 0   | 1          | 1      | 1    | 0   | 0    |
| 0.1 | 0.5        | 0.7    | 0.9  | 0   | 0.1  |
| 0.8 | 0.1        | 0.1    | 0.1  | 0.8 | 0.9  |

# | Sistema de recomendación

Grafo de aliados/following/followers

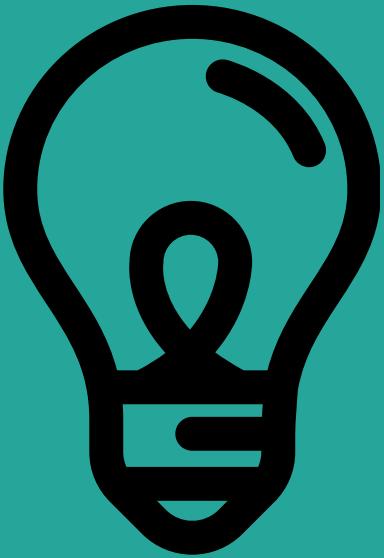
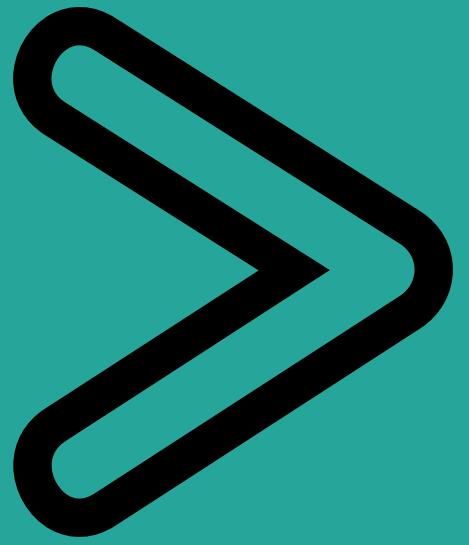


## | Grafos de networkx

# Grafos de networkx

Honor de los aliados





```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import networkx as nx
import requests
import json
import BeautifulSoup
```

| Fin