

UNIVERSIDAD POLITECNICA SALESIANA

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Similitud de Coseno

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In [ ]: from neo4j import GraphDatabase
username = ('neo4j')
password = ('12345')
uri = "bolt://localhost:11000"
driver = GraphDatabase.driver(uri, auth=(username, password)) session2=
driver.session()
cocina = session2.run("CREATE (french:Cuisine
                        {name:'French'}), (italian:Cuisine
                        {name:'Italian'}), (indian:Cuisine
                        {name:'Indian'}), (lebanese:Cuisine
                        {name:'Lebanese'}), (portuguese:Cuisine
                        {name:'Portuguese'}), (british:Cuisine
                        {name:'British'}), (mauritian:Cuisine
                        {name:'Mauritian'})")
persona = session2.run("CREATE (zhen:Person
                        {name:'Zhen'}), (praveena:Person
                        {name:'Praveena'}), (michael:Person
                        {name:'Michael'}), (arya:Person
                        {name:'Arya'}), (karin:Person
                        {name:'Karin'})")
relacion = session2.run("CREATE (praveena)-[:LIKES {score: 9}]->(indian), (praveena)-[:LIKES {score: 7}]->(portuguese), (praveena)-[:LIKES {score: 1}]->(mauritian)")
relacion2 = session2.run("CREATE (zhen)-[:LIKES {score: 10}]->(french), (zhen)-[:LIKES {score: 6}]->(indian), (zhen)-[:LIKES {score: 5}]->(mauritian)")
relacion4 = session2.run("CREATE (arya)-[:LIKES {score: 10}]->(lebanese), (arya)-[:LIKES {score: 10}]->(italian), (arya)-[:LIKES {score: 5}]->(british)")
relacion5 = session2.run("CREATE (karin)-[:LIKES {score: 9}]->(lebanese), (karin)-[:LIKES {score: 7}]->(italian), (karin)-[:LIKES {score: 5}]->(british)")
session2.close() driver.close()
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```
In [1]: #obtener similitud entre los gustos de la persona
gustos = session2.run("MATCH (p:Person), (c:Cuisine) OPTIONAL MATCH (p)-[:likes:LIKES]->(c) WITH {item:id(p), weights: collect(c)}")
print(gustos)
for c in gustos:
    print(c, '\n')
    print(' ')
    print(' ')
    print(' ')
similitudGustos = session2.run("MATCH (p:Person), (c:Cuisine) OPTIONAL MATCH (p)-[:likes:LIKES]->(c) WITH {item:id(p), weights: collect(c)}")
totalSimilitud = session2.run("MATCH (p:Person), (c:Cuisine) OPTIONAL MATCH (p)-[:likes:LIKES]->(c) WITH {item:id(p), weights: collect(c)}")
<neo4j.work.result.Result object at 0x000002767F86C2C8>
<Record nodes=5 similarityPairs=5 writeRelationshipType='SIMILAR' writeProperty='score' min=0.9542236328125 max=1.0000038146>
```

<Record from='Praveena' to='Karin' similarity=1.0>

<Record from='Karin' to='Praveena' similarity=1.0>

<Record from='Michael' to='Arya' similarity=0.9788908326303921>

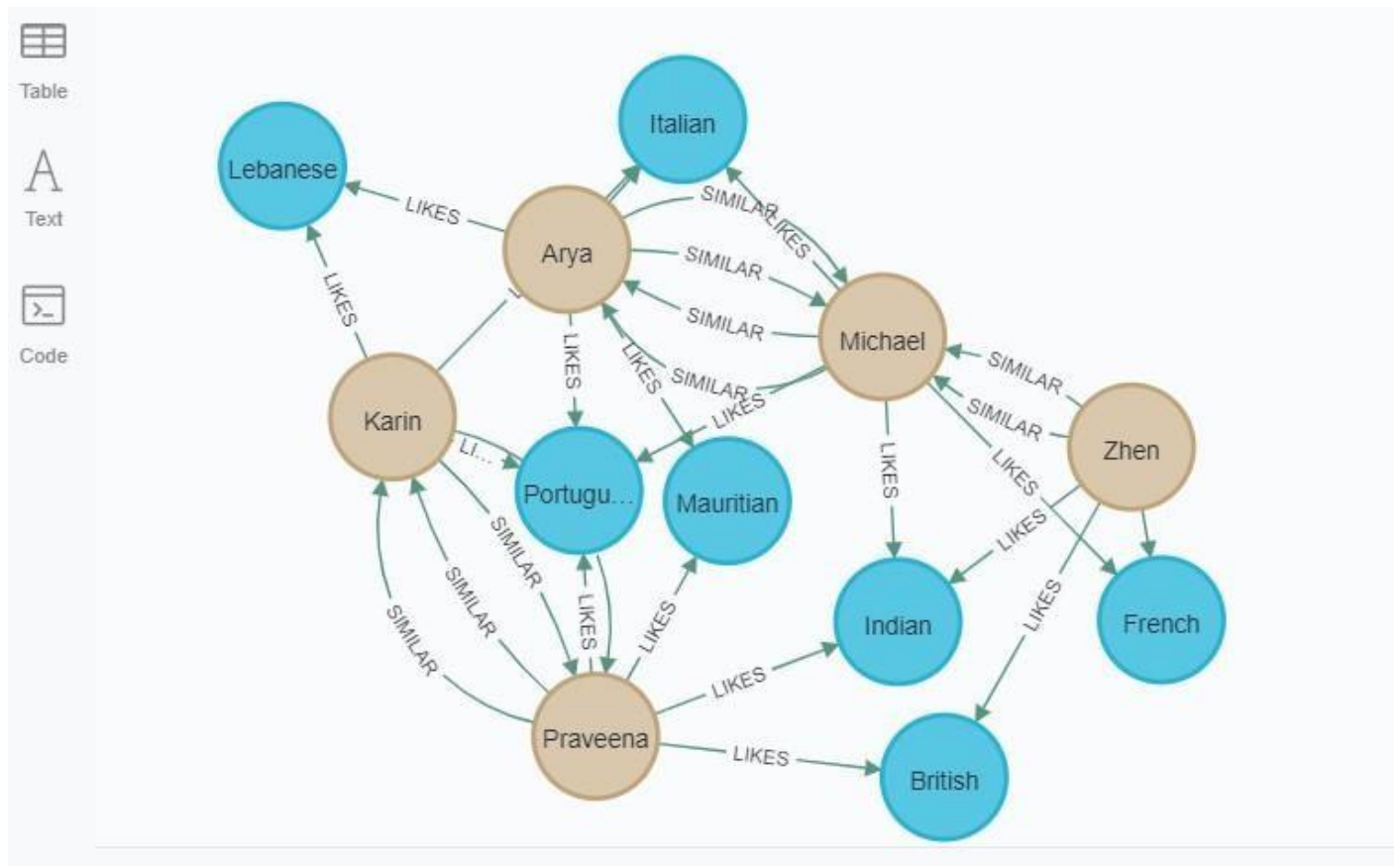
<Record from='Arya' to='Michael' similarity=0.9788908326303921>

<Record from='Arya' to='Karin' similarity=0.9610904115204073>

<Record from='Karin' to='Arya' similarity=0.9610904115204073>
<Record from='Zhen' to='Michael' similarity=0.9542262139256075>
<Record from='Michael' to='Zhen' similarity=0.9542262139256075>
<Record from='Praveena' to='Michael' similarity=0.9429903335828895>
<Record from='Michael' to='Praveena' similarity=0.9429903335828895>
<Record from='Zhen' to='Praveena' similarity=0.9191450300180579>
<Record from='Praveena' to='Zhen' similarity=0.9191450300180579> <Record
from='Karin' to='Michael' similarity=0.8498063272285821> <Record
from='Arya' to='Praveena' similarity=0.7194014606174091>
<Record from='Zhen' to='Arya' similarity=0.0>

<Record nodes=5 similarityPairs=5 writeRelationshipType='SIMILAR' writeProperty='score' min=0.9542236328125 max=1.0000038146972656 mean=0.9824020385742187 p95=1.0000038146972656>

Arbol de nodos



In []: