

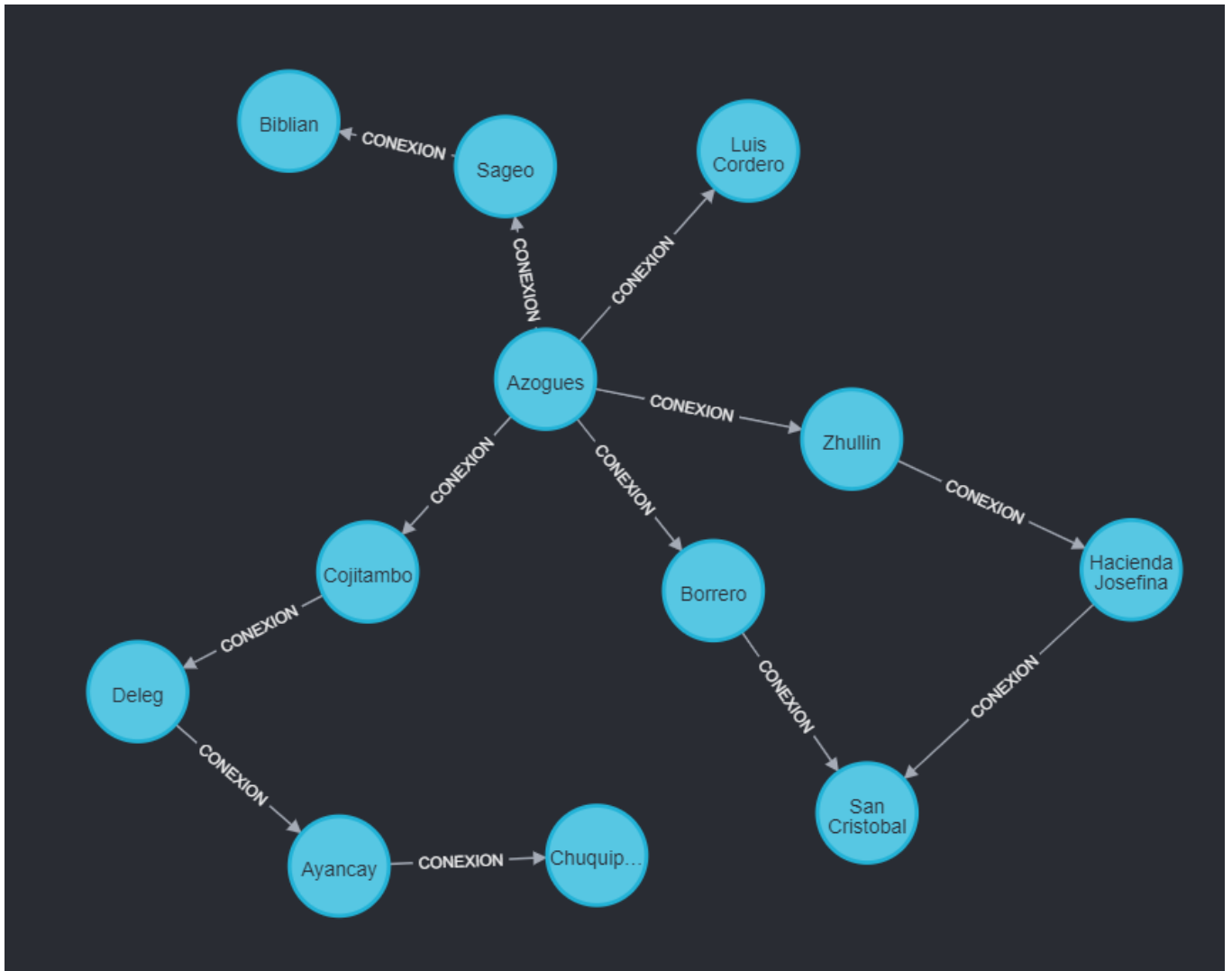
UNIVERSIDAD POLITECNICA SALESIANA

Narcisa Araujo

NEO4J Breadth first Search

Creación de Nodos en NEO4j

```
CREATE (c1:Cañar {name: 'Azogues'}),  
      (c2:Cañar {name: 'Sageo'}),  
      (c3:Cañar {name: 'Cojitambo'}),  
      (c4:Cañar {name: 'Zhullin'}),  
      (c5:Cañar {name: 'Borrero'}),  
      (c6:Cañar {name: 'Luis Cordero'}),  
      (c7:Cañar {name: 'Biblian'}),  
      (c8:Cañar {name: 'Deleg'}),  
      (c9:Cañar {name: 'Hacienda Josefina'}),  
      (c10:Cañar {name: 'San Cristobal'}),  
      (c11:Cañar {name: 'Ayancay'}),  
      (c12:Cañar {name: 'Chuquipata'}),  
      (c1)-[:CONEXION {distancia: 4}]->(c2),  
      (c1)-[:CONEXION {distancia: 9.4}]->(c3),  
      (c1)-[:CONEXION {distancia: 11.5}]->(c4),  
      (c1)-[:CONEXION {distancia: 3.8}]->(c5),  
      (c1)-[:CONEXION {distancia: 5.2}]->(c6),  
      (c2)-[:CONEXION {distancia: 3.3}]->(c7),  
      (c3)-[:CONEXION {distancia: 13}]->(c8),  
      (c4)-[:CONEXION {distancia: 14.3}]->(c9),  
      (c5)-[:CONEXION {distancia: 11.5}]->(c10),  
      (c8)-[:CONEXION {distancia: 7.9}]->(c11),  
      (c11)-[:CONEXION {distancia: 12.4}]->(c12),  
      (c9)-[:CONEXION {distancia: 3.6}]->(c10)
```



Creacion del gráfico el cual sera almacenado en el catálogo de gráficos

CALL gds.graph.create('CAÑAR', 'Cañar', 'CONEXION', { relationshipProperties: 'distancia' })

neo4j\$ CALL gds.graph.create('CAÑAR', 'Cañar', 'CONEXION', { relationshipProperties: 'distancia' })

nodeProjection	relationshipProjection	graphName	nodeCount	relationshipCount	createMillis
<pre>{ "Cañar": { "properties": { }, "label": "Cañar" } }</pre>	<pre>{ "CONEXION": { "orientation": "NATURAL", "aggregation": "DEFAULT", "type": "CONEXION", "properties": { "distancia": { "property": "distancia", "aggregation": "DEFAULT", "defaultValue": null } } } }</pre>	"CAÑAR"	12	12	57

Ejecución del algoritmo Breadth First Search

```
MATCH (Azogues:Cañar{name:'Azogues'})
WITH id(Azogues) AS startNode
CALL gds.alpha.bfs.stream('CAÑAR', {startNode: startNode})
YIELD path
UNWIND [ n in nodes(path) | n.name ] AS nombres
RETURN nombres
ORDER BY nombres
```

nombres

- 1 "Ayancay"
- 2 "Azogues"
- 3 "Biblian"
- 4 "Borrero"
- 5 "Chuquipata"
- 6 "Cojitambo"
- 7 "Deleg"
- 8 "Hacienda Josefina"
- 9 "Luis Cordero"
- 10 "Sageo"
- 11 "San Cristobal"
- 12 "Zhullin"

In []: