

# neo4j graphsummit

Workshop Preparation

# Preparation for the Graph Summit Workshops

Thank you for your interest in the Graph Summit Workshops. To ensure the best experience, we would encourage you to prepare for the sessions by following the contents of this document.

There are two workshops, and you can find checklists below to follow for whichever one you have chosen to attend (you can change your mind!)

You will need a Neo4j Database to work with in either workshop, and there are two ways to get that setup. Neo4j Sandbox provides a free online database instance that will expire within 3 days. Neo4j Desktop is an application that will run on your laptop, doesn't expire and can subsequently be used for development.



If you are using the Sandbox option, you will need to do this within 3 days of the workshop to ensure it doesn't expire beforehand, and you will need to be able to access port 7687 through your machine. Desktop has no constraints and can be setup as early as you want.



If you have any problems with the instructions in this document, at each Graph Summit there is an 'Ask the Experts' area where you can feel free to ask any questions and get help.

# Checklists

Please use these to ensure you are all setup for the workshop you are interested in.

## Checklist – Architecting Innovative Graph Applications

<i>Either</i> Setup Environment in Sandbox	
<i>Or</i> Setup Environment in Desktop	
Graph Applications Workshop - Ingest	

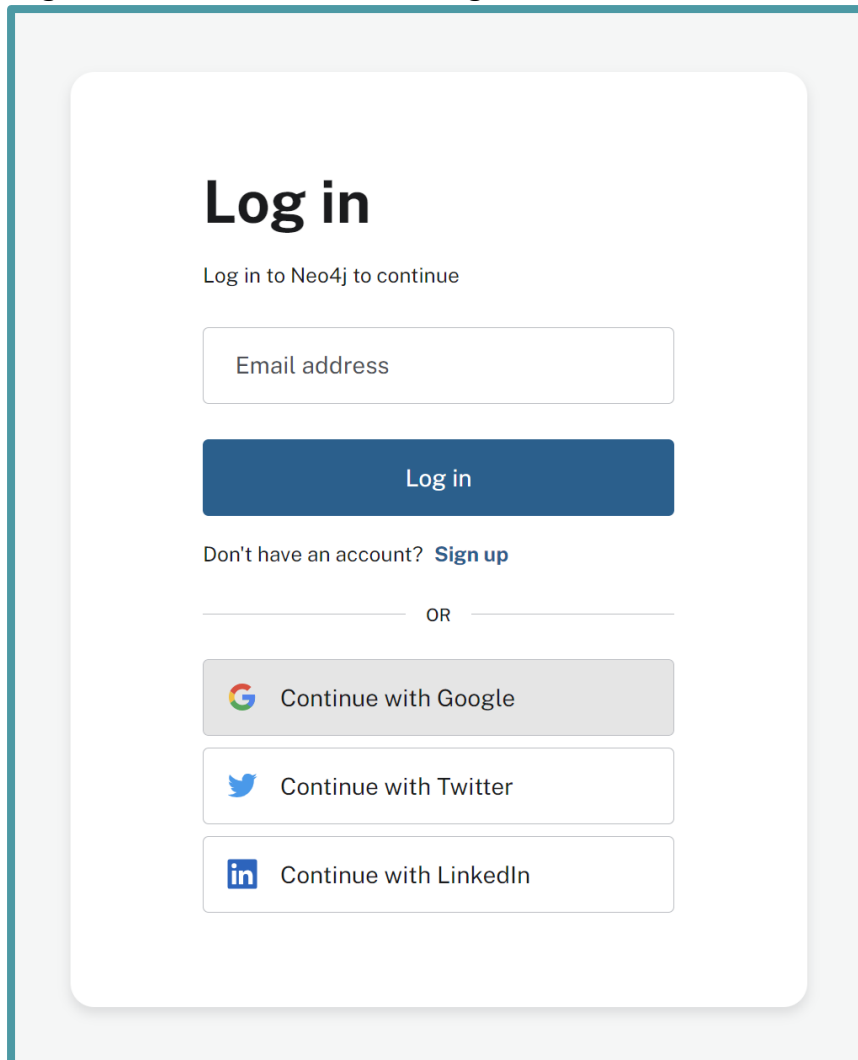
## Checklist – Enabling GenAI Breakthroughs with Knowledge Graphs

<i>Either</i> Setup Environment in Sandbox	
<i>Or</i> Setup Environment in Desktop	
GenAI Workshop - Colab	

# Sandbox

This section gives instructions on how to setup the Neo4j Sandbox environment ready for use with the workshop.

1. Go to <https://sandbox.neo4j.com>
2. Login (or create an account and login)

A screenshot of the Neo4j Sandbox login page. The page has a white background with a light gray border. At the top, the text "Log in" is displayed in a large, bold, black font. Below this, a smaller line of text says "Log in to Neo4j to continue". There is a white input field with the placeholder text "Email address". Below the input field is a dark blue button with the text "Log in" in white. Underneath the button, it says "Don't have an account? Sign up" where "Sign up" is a blue link. A horizontal line with the word "OR" in the center separates the email login section from the social login section. There are three social login buttons: "Continue with Google" (with a Google logo), "Continue with Twitter" (with a Twitter logo), and "Continue with LinkedIn" (with a LinkedIn logo).

**Log in**


Log in to Neo4j to continue


Email address


Log in

Don't have an account? [Sign up](#)

OR

 Continue with Google

 Continue with Twitter

 Continue with LinkedIn

- Once you have logged in, select the 'Blank Sandbox'

**Select a project**

☐ For Developers (14) ☐ For Data Scientists (7)

**Featured Dataset**

**Movies**

A guide to common graph query patterns involving connections between movies, actors, and directors.

Libraries Enabled: ☐ Beginner ☒ For Developers

**OpenStreetMap**

A graph solution to the shortest-path problem with Cypher involving points of interest and routing of Central Park in New York City.

Libraries Enabled: ☐ For Developers ☒ New

**Graph Data Science**

Leverage Neo4j Graph Data Science library to explore graph algorithms for analytics and feature engineering.

Libraries Enabled: ☐ Beginner ☒ For Data Scientists

**ICIJ Offshoreleaks**

The Offshore leaks dataset and guide from the International Consortium of Investigative Journalists (ICIJ).

**Your own data**

**Blank Sandbox**

A sandbox to explore connections in your own data - by importing CSV, using Neo4j drivers or any other way you like.

Project: **Blank Sandbox**

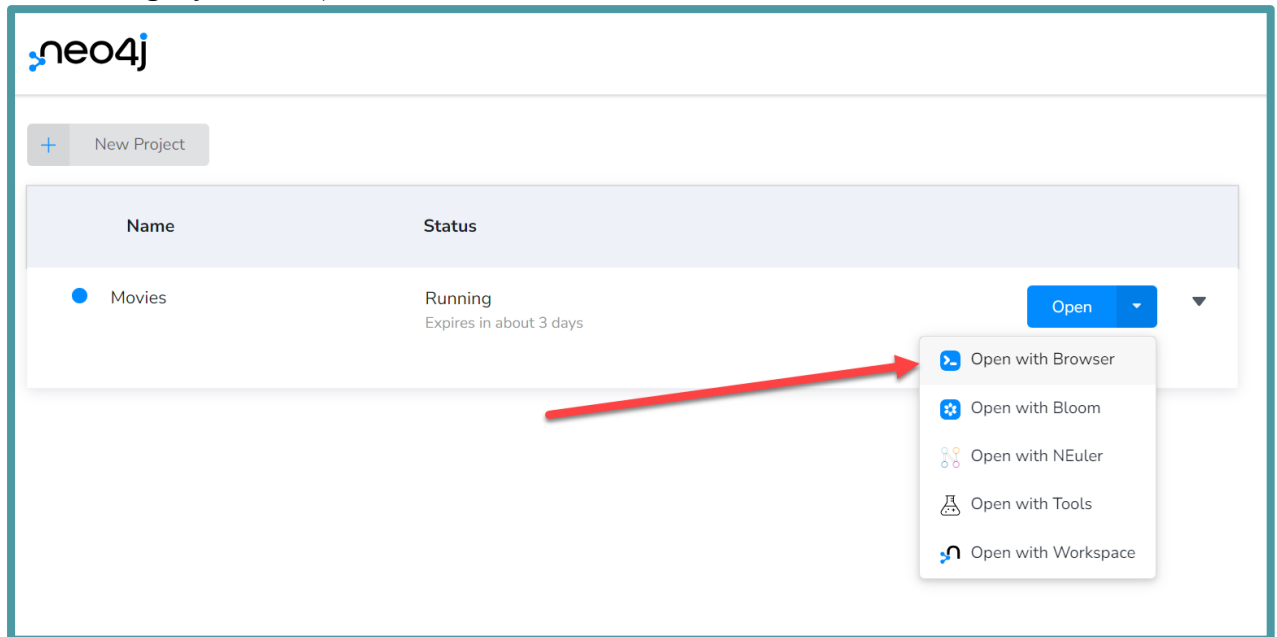
- The database will then be created

neo4j

+ New Project

Name	Status	
Movies	Running Expires in about 3 days	<input type="button" value="Open"/> ▼

- At this stage, you can open the Browser



- Please go to the next section specific for your workshop:  
Graph Applications Workshop - Ingest  
GenAI Workshop - Colab

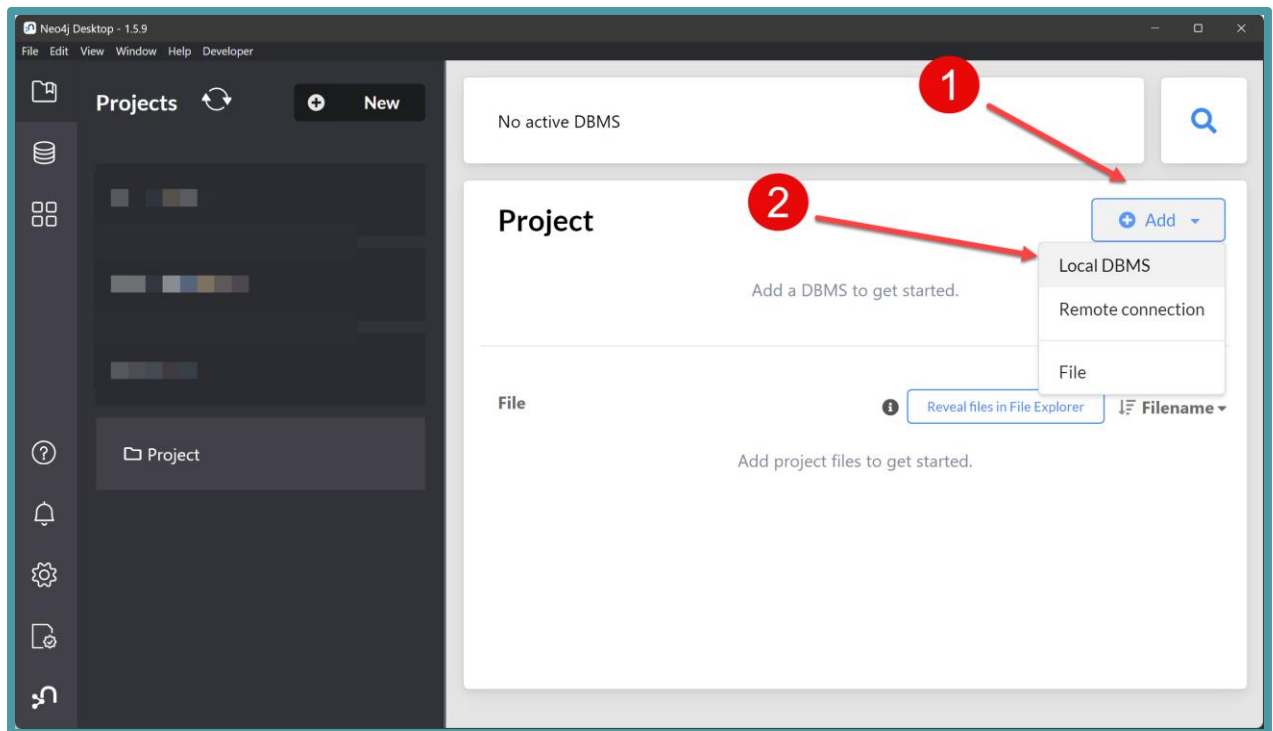
# Desktop

This section gives instructions on how to setup the Neo4j Desktop environment ready for use with the workshop. If you are intending to use the Sandbox, please see the section above.

You can get Neo4j Desktop from the Neo4j Deployment Center: <https://neo4j.com/deployment-center/>

Once you have it installed, you can setup the environment by following the steps below:

1. Create a new Local DBMS instance



2. Select the latest version (at the time of writing that was 5.17.0, but you can tell by the '(latest)' text that will always be there)

**Project** + Add

**Name**

**Password**

**Version**

✕ Cancel ✓ Create

3. We need to add some plugins to the database. To do so, click on the Area indicated by ❶. Then select the 'Plugins' and install APOC by selecting the 'Install' button.

**Project** + Add

Graph DBMS 5.17.0 Start Open ...

**File** Reveal files in File Explorer Filename

Add project files to get started.

**Details** **Plugins** Upgrade

❶ ❷

▼ APOC

Compatible version: 5.17.1

The APOC library consists of many (about 450) procedures and functions to help with many different tasks in areas like collections manipulation, graph algorithms, and data conversion.

GitHub Documentation

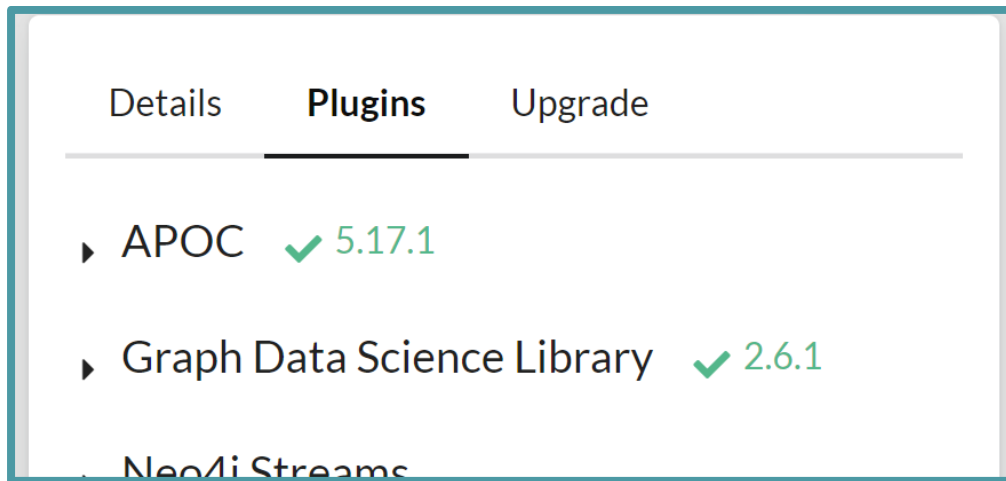
Install ❸

► Graph Data Science Library

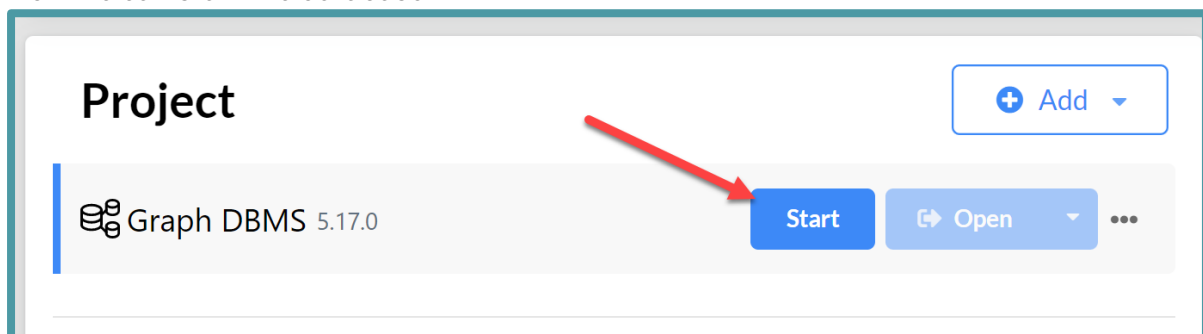
► Neo4i Streams

4. Repeat step (3) for the Graph Data Science Library. Once complete the plugins panel should look similar to this (the version numbers may be different).

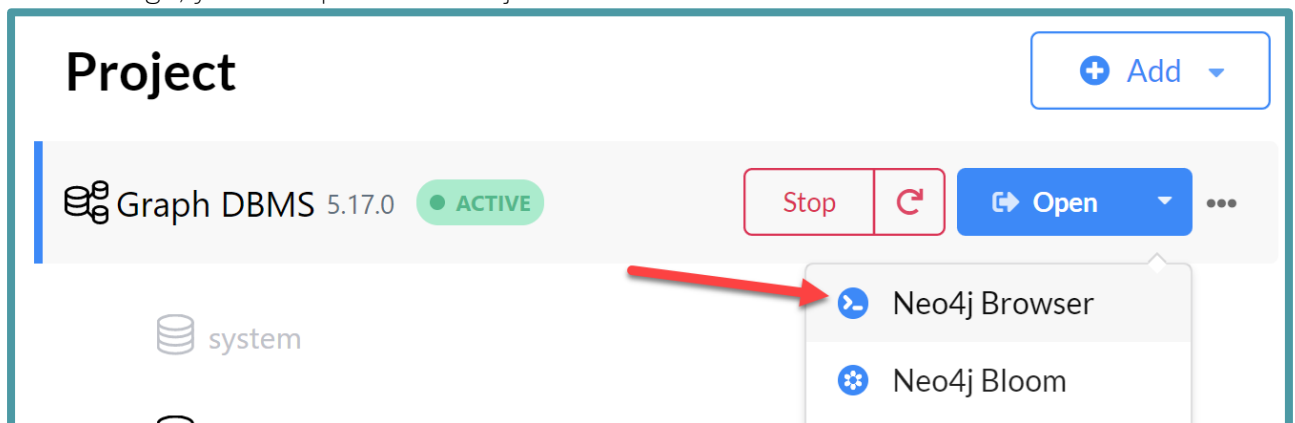




5. Now we can start the database:



6. At this stage, you can open the Neo4j Browser



7. Please go to the next section specific for your workshop:  
Graph Applications Workshop - Ingest  
GenAI Workshop - Colab

# Graph Applications Workshop - Ingest

In this section we describe how to do the initial ingestion of data for the Workshop. You will execute a script in the browser, which will load some data.

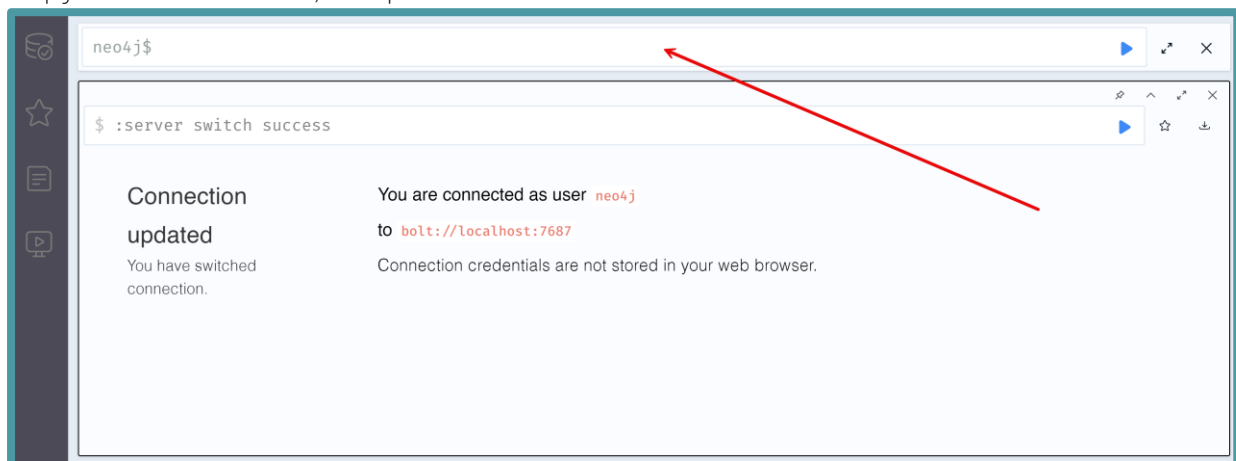
If you have any problems with this stage. Please let your instructor know at the beginning of the session, and they can try to help you.

1. Open the load script:

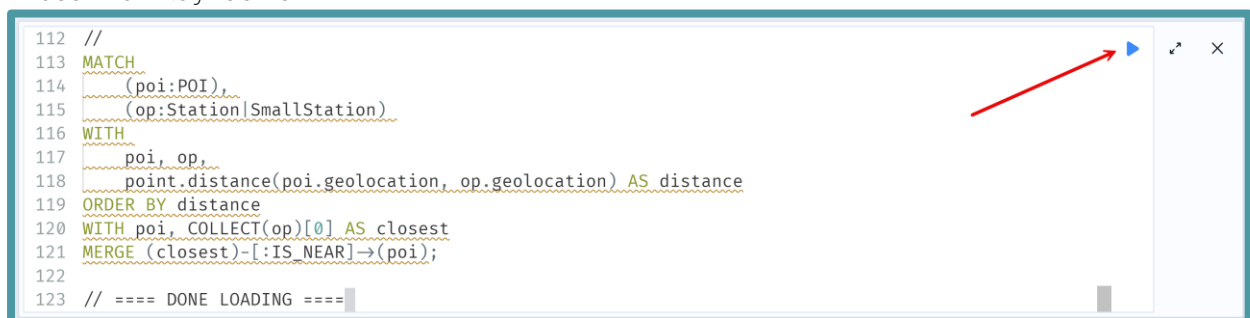


<https://bit.ly/gsummit2023-load>

2. Copy the contents of it, and paste it into the Execution Panel



3. Press the 'Play' button



4. You should get all green checks next to the executions. Any errors at all notify your instructor.

The screenshot shows the Neo4j Browser interface with a list of 10 Cypher queries. Each query is followed by a green checkmark, indicating successful execution. A red arrow points to the first checkmark.

```

$ // // To execute this in the Neo4j Browser - copy and paste the contents into the execution box. ...
neo4j$ CALL gds.graph.list() YIELD graphName AS toDrop CALL gds.graph.drop(toDrop) YIELD graphNa... ✓
neo4j$ MATCH (n) DETACH DELETE n ✓
neo4j$ CALL apoc.schema.assert({},{}) ✓
neo4j$ CREATE CONSTRAINT uc_OperationalPoint_id IF NOT EXISTS FOR (op:OperationalPoint) REQUIRE ... ✓
neo4j$ CREATE INDEX index_OperationalPointName_name IF NOT EXISTS FOR (opn:OperationalPointName)... ✓
neo4j$ LOAD CSV WITH HEADERS FROM "https://raw.githubusercontent.com/cskardon/gsummit2023/main/d... ✓
neo4j$ LOAD CSV WITH HEADERS FROM "https://raw.githubusercontent.com/cskardon/gsummit2023/main/d... ✓
neo4j$ LOAD CSV WITH HEADERS FROM "https://raw.githubusercontent.com/cskardon/gsummit2023/main/d... ✓
neo4j$ LOAD CSV WITH HEADERS FROM "https://raw.githubusercontent.com/cskardon/gsummit2023/main/d... ✓
neo4j$ MATCH (poi:POI), (op:Station|SmallStation) WITH poi, op, point.distance(poi.geolocation, ... ✓
  
```

5. You are all ready to go!

# GenAI Workshop - Colab

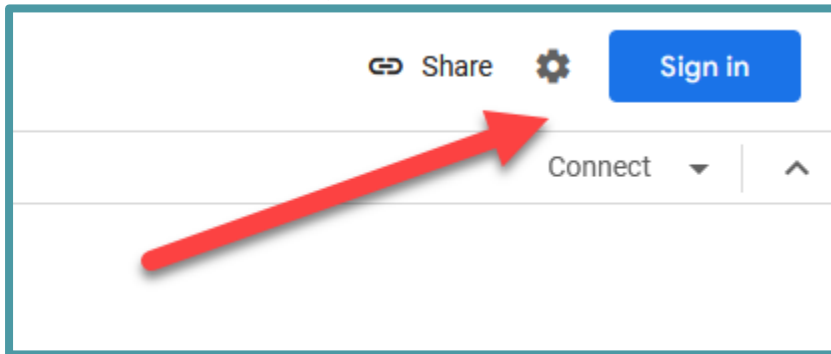
In this section we describe what you need to do to be able to take part in the Gen AI workshop.

1. Open the Google Colab Website



<https://bit.ly/genai-colab>

2. Ensure you are signed in, you can tell from the 'Sign In' button in the top right hand corner of the site. You do need a Google account to complete the workshop tasks.



3. You are now ready for the workshop