

neo4j

Movies Recommendation Chatbot using Vertex AI

Hi, I'm Sid



Developer Relations, APAC at Neo4j

Started my career with IBM as Java Technology Engineer

10+ years in Developer Relations & Community Building

Ex-Google and worked at 2 Startups

Google Developer Expert in Gen-AI

GDG and GDG Cloud Bengaluru Organizer



Scan me

2 Giveaways 🎉 and more

*Questions will be revealed later



NETFLIX

I want to watch a sci-fi
movie with time travel

Recommend me a
romantic comedy with a
happy ending

I'm in the mood for
something with
superheroes but not too
serious

I want a thriller that keeps
me on the edge of my seat

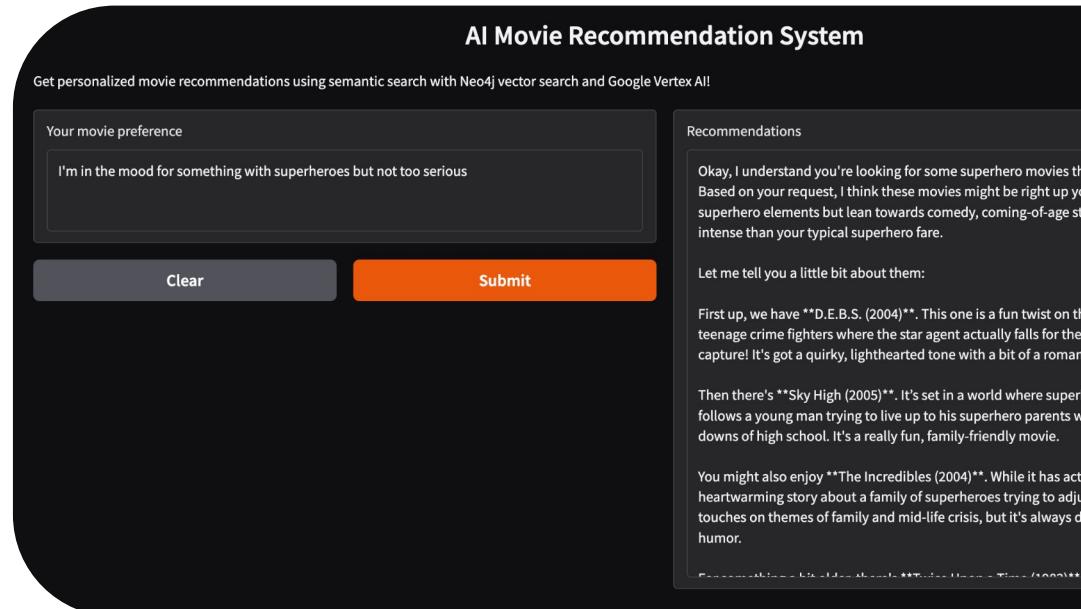
Show me movies about
artificial intelligence taking
over the world

3 Steps to a Movies Recommendation Chatbot

Movies Recommendation chatbot

Ground model responses in Google Search providing access to fresh, high-quality information that significantly improves accuracy of responses

1. Gather data and store in Neo4j
2. Generate vector embeddings on movie overviews/plots using Text-Embeddings from Vertex AI
3. Build a gradio chatbot using Gemini and deploy on Hugging Face Spaces or Google Cloud Run



1 Overview**2** Setup Neo4j AuraDB**3** Before you begin**4** Prepare the Movies dataset**5** Build Movies Knowledge Graph**6** Generate and Load Embeddings to perform Vector Similarity Search**7** The Movie Recommendation Chatbot**8** (Optional) Deploying to Google Cloud Run**9** Clean up

...

Report a mistake

Codelab - Build a Movie Recommendation Chatbot using Neo4j and Vertex AI

About this codelab

 Last updated Apr 4, 2025 Written by Romin Irani and Siddhant Agarwal(GDE)<https://bit.ly/codelab-movies-vertexai>

1. Overview

In this codelab, you'll build an intelligent movie recommendation chatbot using a combination of Neo4j, Vertex AI, and Gemini. The chatbot uses a Neo4j Knowledge Graph as the foundation to represent movies, actors, directors, producers, genres, etc. To enhance the search experience, you'll generate vector embeddings from movie plot overviews using Vertex AI's `text-embedding-004` model.

Finally, you'll integrate Gemini to power a conversational interface where users can ask natural language questions like "What should I watch if I liked Interstellar?" and receive personalized movie suggestions based on semantic similarity and graph-based context.

Through the codelab, you will employ a step by step approach as follows:

Open Neo4j Aura console

console.neo4j.io

Create a free account

Google is quick

Using email or Google account

Create your free Neo4j Instance

By clicking on “Create free instance”



Scan to get started

Open Neo4j Aura console

console.neo4j.io

Create a free account



Using email or Google account

Create your free Neo4j Instance

By clicking on “Create free instan

NE04J_URI=<yourURI>

NE04J_USERNAME=<User>

NE04J_PASSWORD=<Password>

AURA_INSTANCEID=<instanceId>

AURA_INSTANCENAME=<instanceName>

After confirmation you'll get a text file downloaded containing the above information. **Keep it safe**

Neo4j Fundamentals

Graphs

graph - Google Search

https://www.google.com/search?scas_evs=658059ba84023065&sca_upv=1&sxsrf=ADLYWlJi1MeE_s_2BhDUqQEpi...

graph

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Math Growth Coordinate Paper Function Quadrant Printable Business Grid >

A line graph to show the number of hours spent reading

Number of hours

Days of the week

BBC Line graphs - KS3 Maths - BBC Bitesize

Efofex Graph Axes Preferences

Indeed 13 Types of Graphs and Charts (...)

Courses.lumenlearning.co... Types of Graphs | Macro...

maaw.info Blank Graph 1

Data Viz Project Line Graph | Data Viz Pro...

Twinkl Favourite Colour

Related searches

- growth graph
- blank graph
- math graph

w Wikipedia Graph of a function - Wiki...

Learnosity Author Guide Graphing – Learnosity ...

Cuemath Bar Graph - Definition, ...

TEAM TOTAL SCORES

https://authorguide.learnosity.com/hc/en-us/articles/360000448637-Graphing

graph theory - Google Search

https://www.google.com/search?q=graph+theory&sca_esv=658059ba84023065&sca_upv=1&udm=2&biw=1267&bih=600

Google graph theory

All Images Books Videos News Maps Flights More Tools Saved

Computer science Path Tree Social network Diagram Vertex Edge Biology Cc >

TREE **GRAPH**

Medium A Gentle Introduction To Graph Theory ...

Medium A Gentle Introduct...

Science in the News - Harvard University Graph Theory 101 - Science in the News

Science in the News - Harvard U... Graph Theory 101 - Science i...

YouTube Introduction to Graph Theory: ...

w Wikipedia Graph theory - Wikipedia

Graph theory

GeeksforGeeks Mathematics | Graph Theory Basics - ...

Brilliant Graph Theory | Brilliant ...

Python in Plain English Graph Theory. 1. Introduction to Gr...

A VERY BRIEF INTRODUCTION TO graph theory

Graphs are a way to formally represent a collection of interconnected objects.

In undirected graphs, edges are defined as ordered pairs, with no further source & target.

So, what's the definition of a graph?

$G = (V, E)$ where V is a set of nodes, also called vertices and E is a set of edges.

Neo4j: Graph Data Platform

Native Graph Database

The foundation of the Neo4j platform; delivers enterprise-scale and performance, security, and data integrity for transaction and analytical workloads.

Data Science and Analytics

Explorative tools, rich algorithm library, and Integrated supervised Machine Learning framework.

Development Tools & Frameworks

Tooling, APIs, query builder, multi-language support for development, admin, modeling, and rapid prototyping needs.

Discovery & Visualization

Code-free querying, data modeling and exploration tools for data scientists, developers, and analysts.

Graph Query Language Support

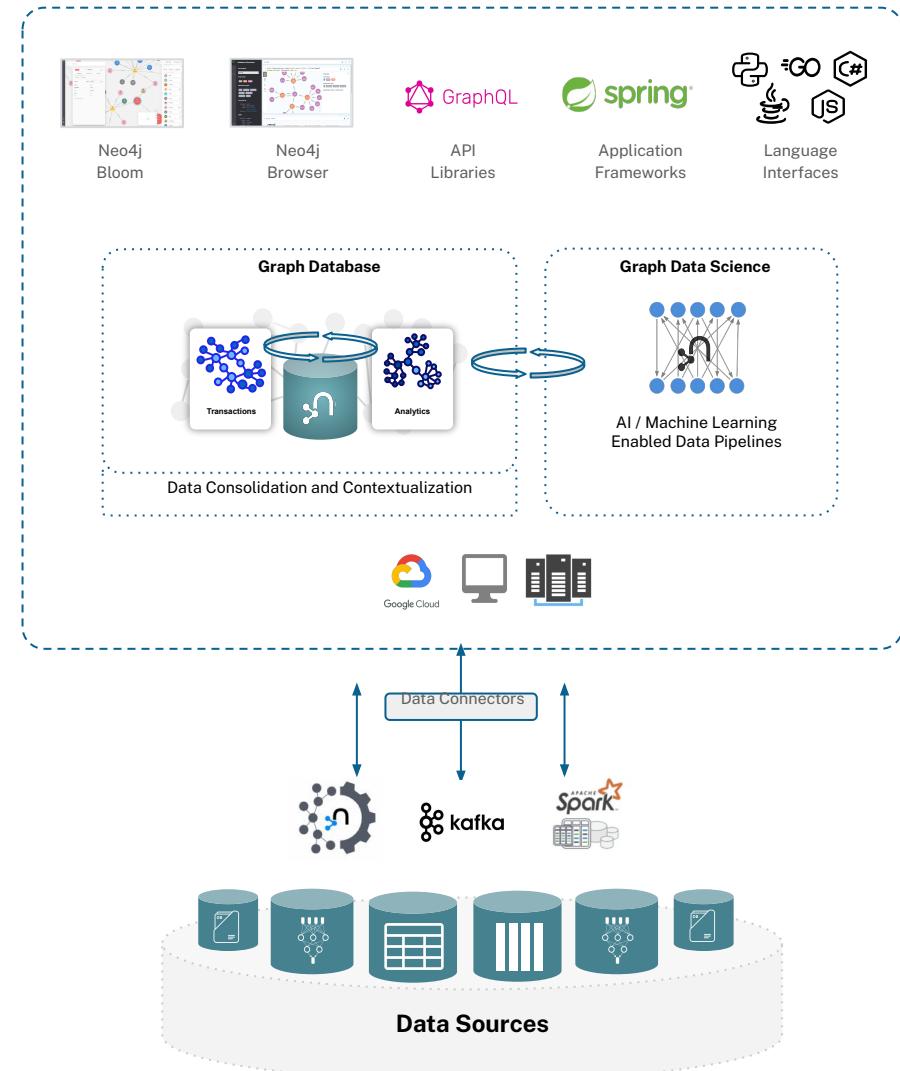
Cypher & openCypher; Ongoing leadership and standards work (GQL) to establish lingua franca for graphs.

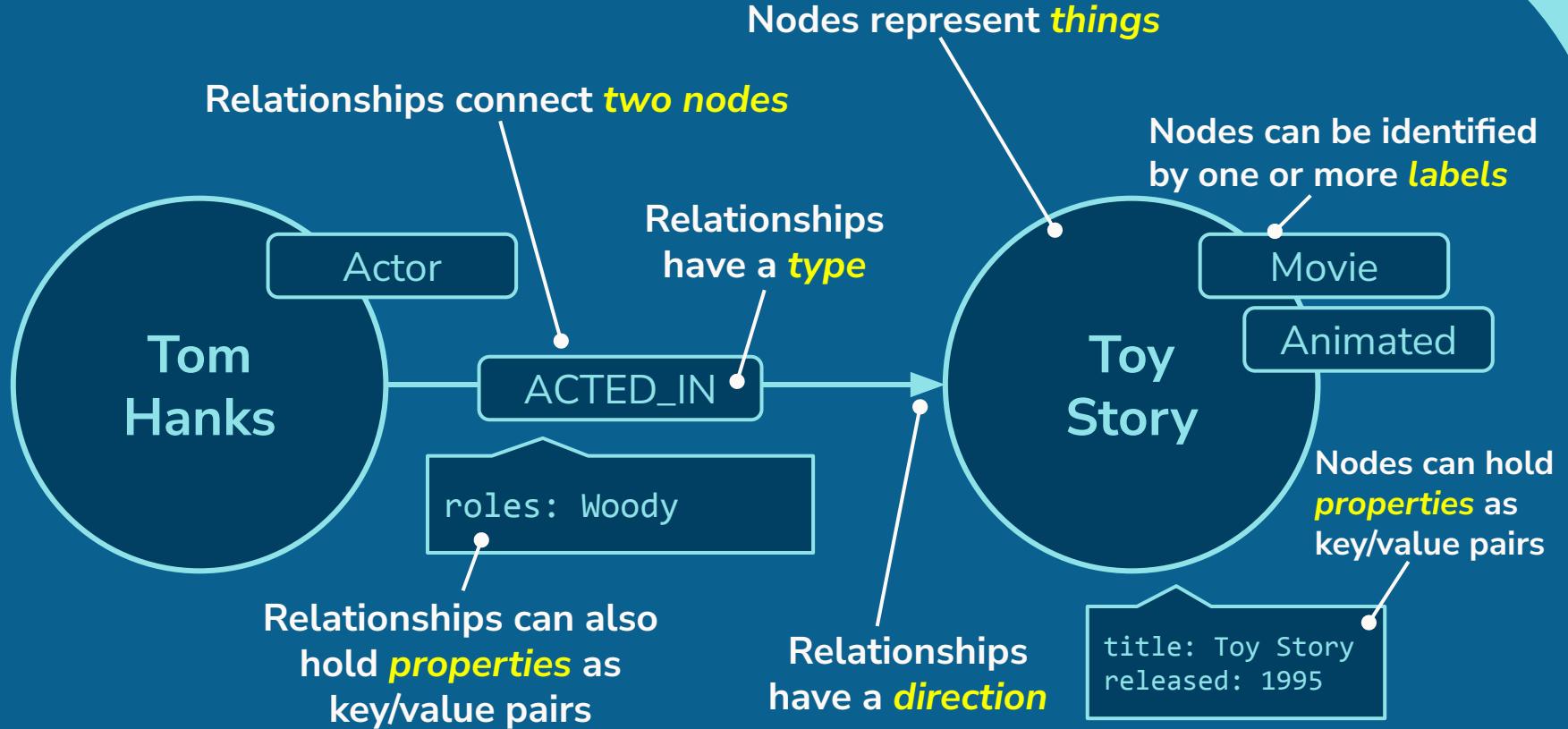
Ecosystem & Integrations

Rich ecosystem of tech and integration partners. Ingestion tools (JDBC, Kafka, Spark, BI Tools, etc.) for bulk and streaming needs.

Runs Anywhere

Deploy as-a-Service (AuraDB) or self-hosted within your cloud of choice (AWS, GCP, Azure) via their marketplace, or on-premises.





Why?

Directors.

Steven Spielberg
Christopher Nolan
Martin Scorsese
James Cameron

...

Movies.

Twilight Zone
Jurassic Park
Inception
Taxi Driver

...

Genres.

Horror
Thriller
Science Fiction
Drama

...



A simple one-to-one relation between movie, director and its genre.

Movies can have multiple directors.

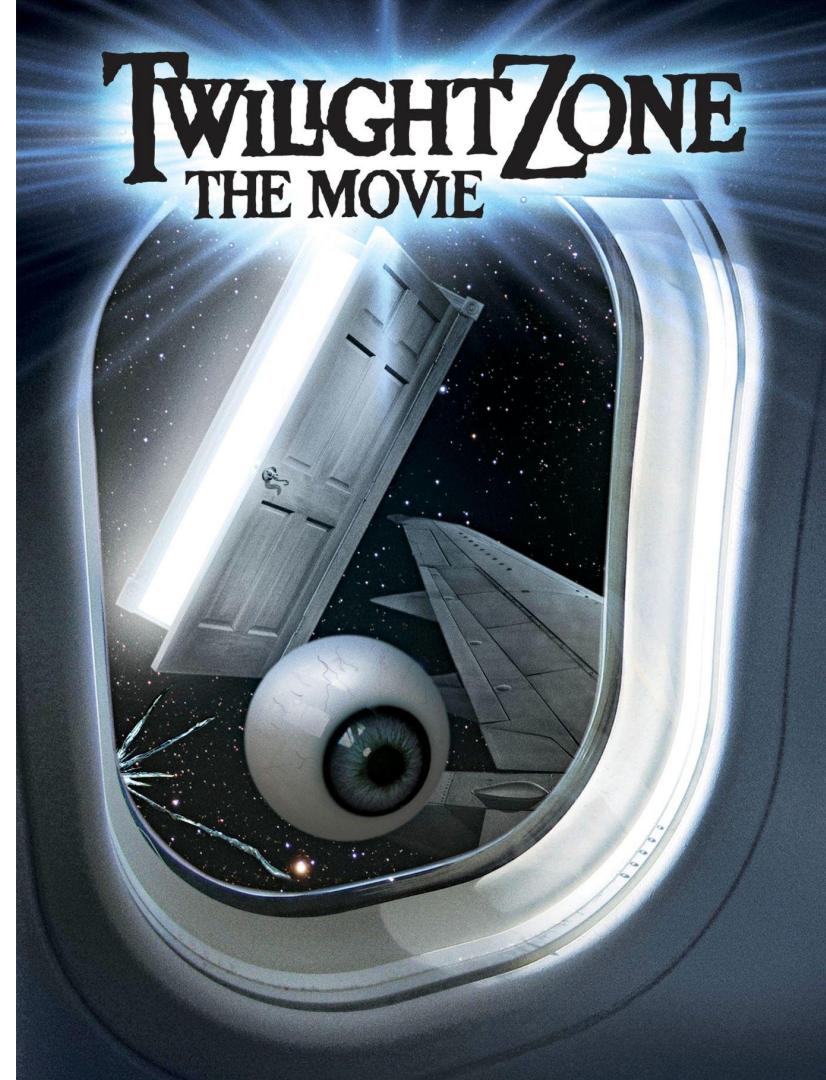
Steven Spielberg

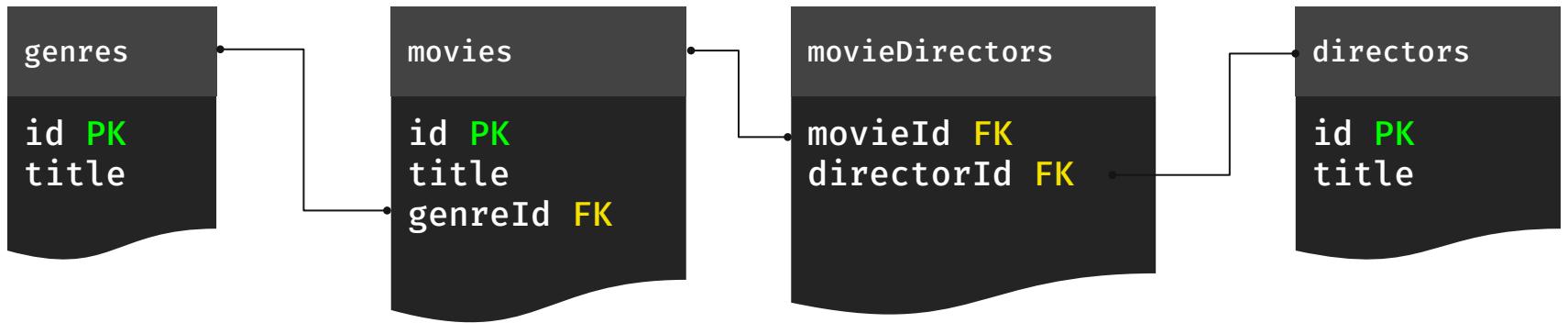
John Landis

Joe Dante

George Miller

Let's change the schema :)





We had to modify our logical model, bringing in unnecessary complexity.

Movies can also have multiple genre.

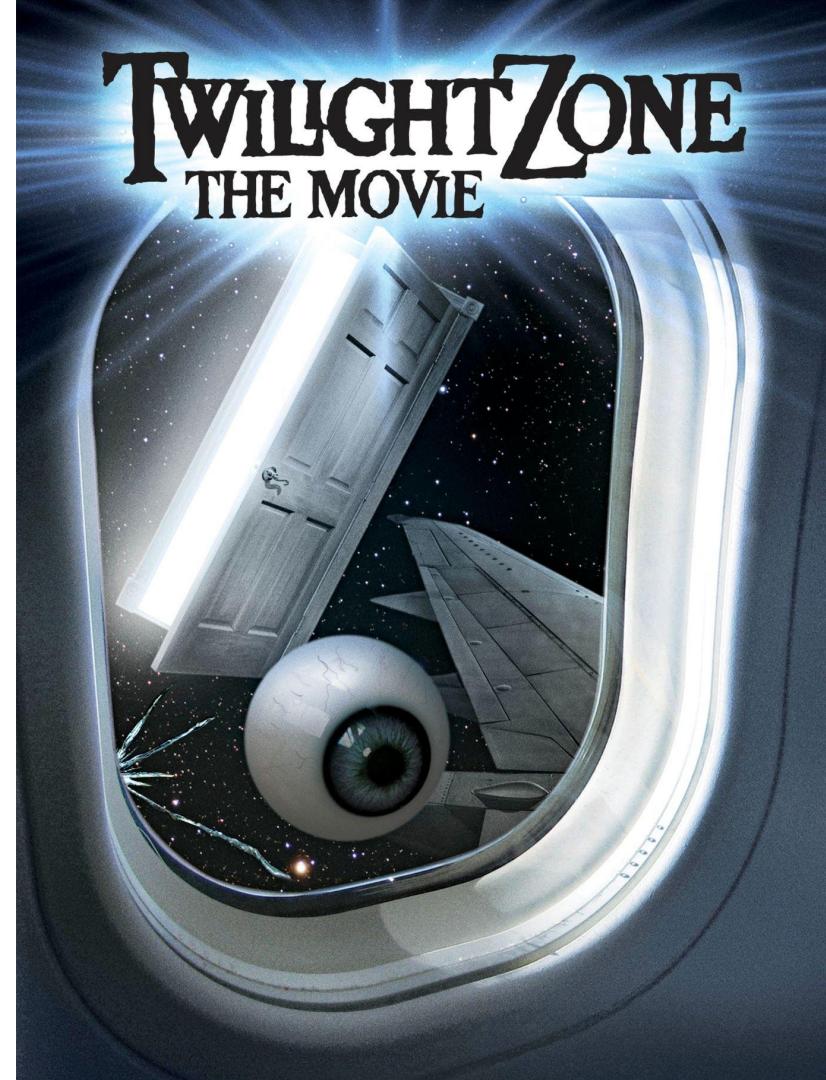
Harrow

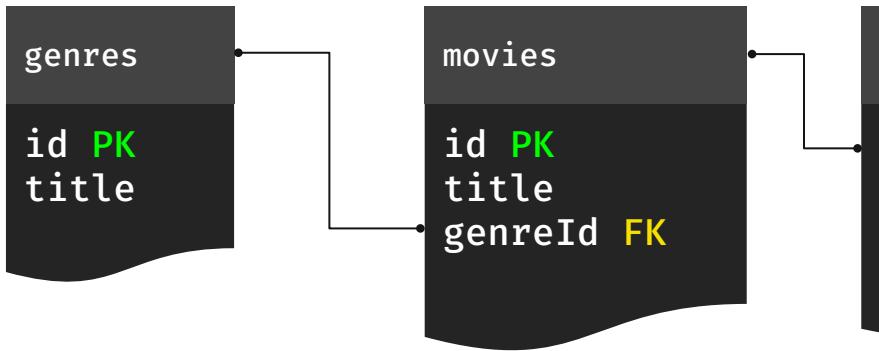
Thriller

Science Fiction

Fantasy

No way I'm migrating that again.





We had to modify our logical model, bringing in ur

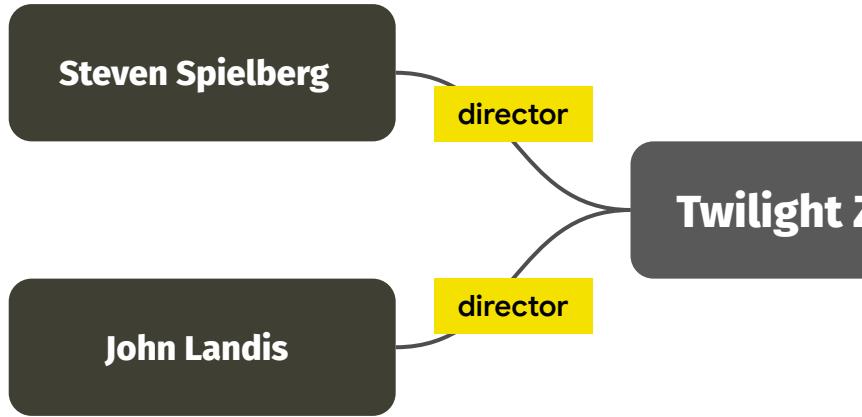
Forces a strict schema.

Complex joins to avoid
data duplications.

Poor performance with
multiple joins.

Not suitable for non
structured data.



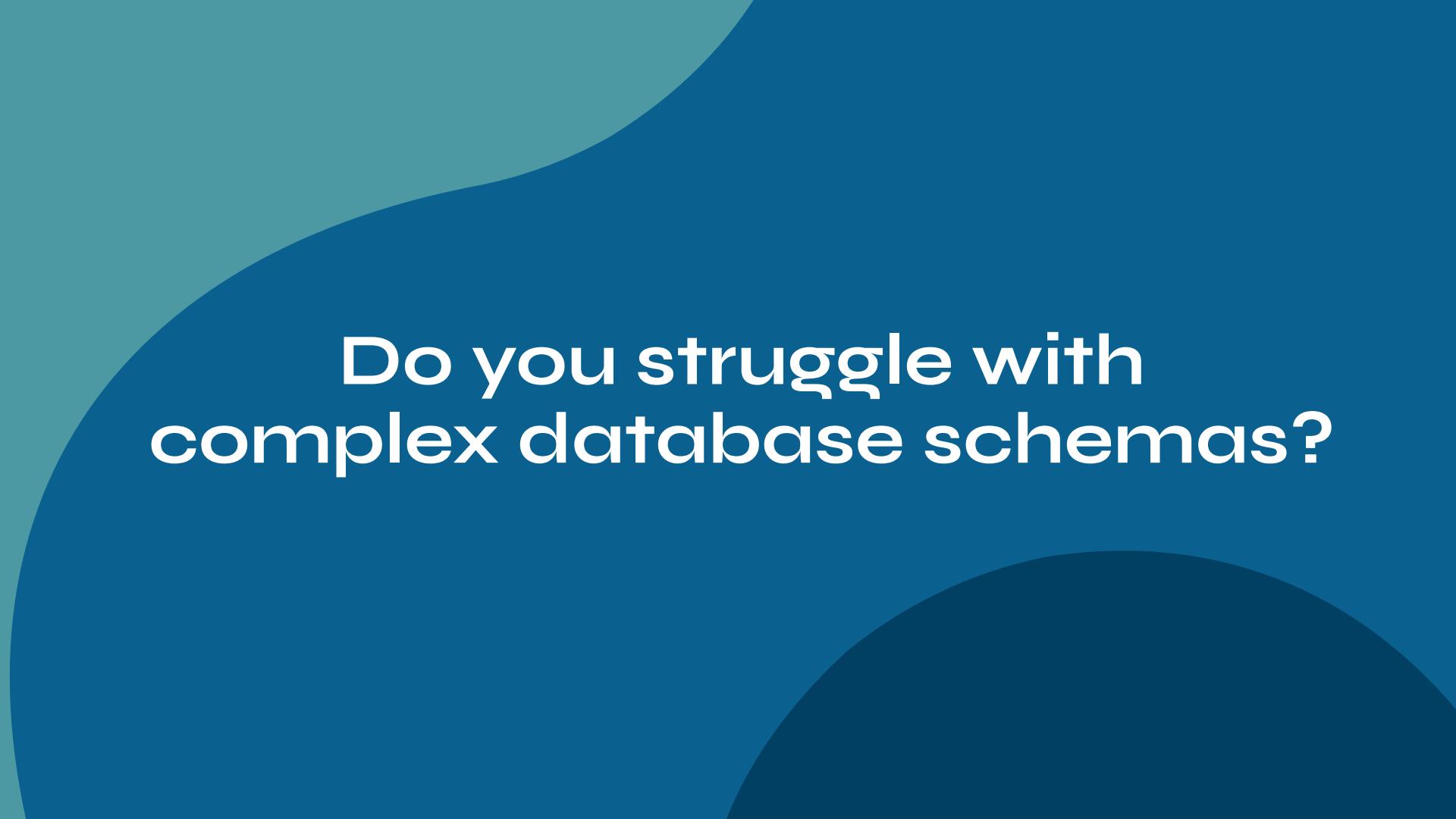


Super efficient handling
of the relationships.

No data duplication.

Easy to maintain data
consistency.

Built in query language.



**Do you struggle with
complex database schemas?**

**Do you struggle with
poorly performing
database queries?**

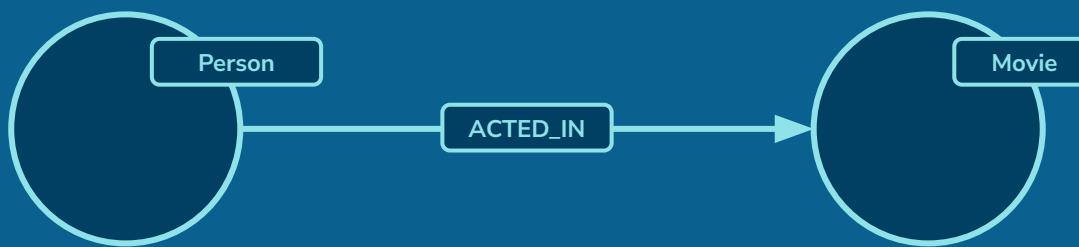
**Do you store
hierarchical data or
complex networks?**

**Do you need to analyze the
connections between data?**

**Graph databases are
designed to efficiently **store** and
query complex networks of
nodes and relationships**

Cypher

Cypher is a **declarative** language that allows you to **identify patterns** in your data using an **ASCII-art style syntax** consisting of **brackets**, **dashes** and **arrows**.



(p:Person)-[r:ACTED_IN]->(m:Movie)

Reading

Reading from Neo4j

```
// Find a pattern in the database
```

```
MATCH (p:Person)-[r:ACTED_IN]->(m:Movie)
```

SQL Equivalent

FROM/JOIN

```
// Filter on a node property
```

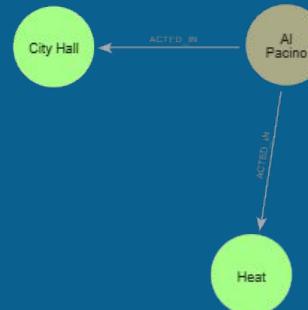
```
WHERE p.name = "Al Pacino"
```

WHERE

```
// Choose what to return
```

```
RETURN p.name AS actor, r.role AS role
```

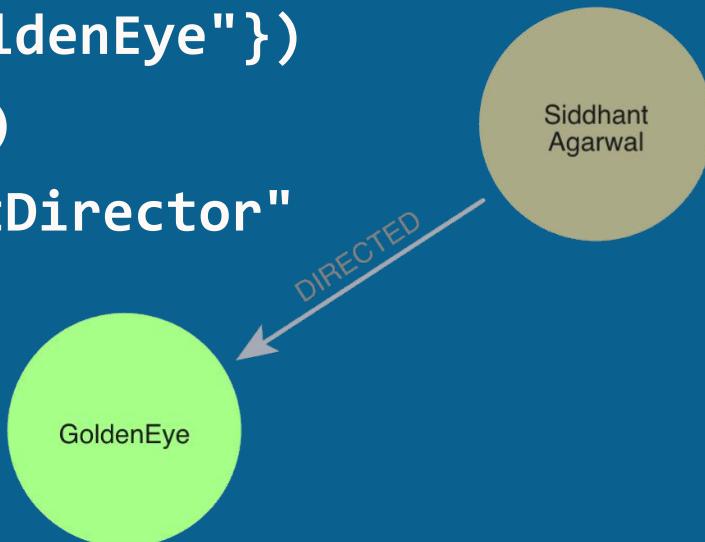
SELECT



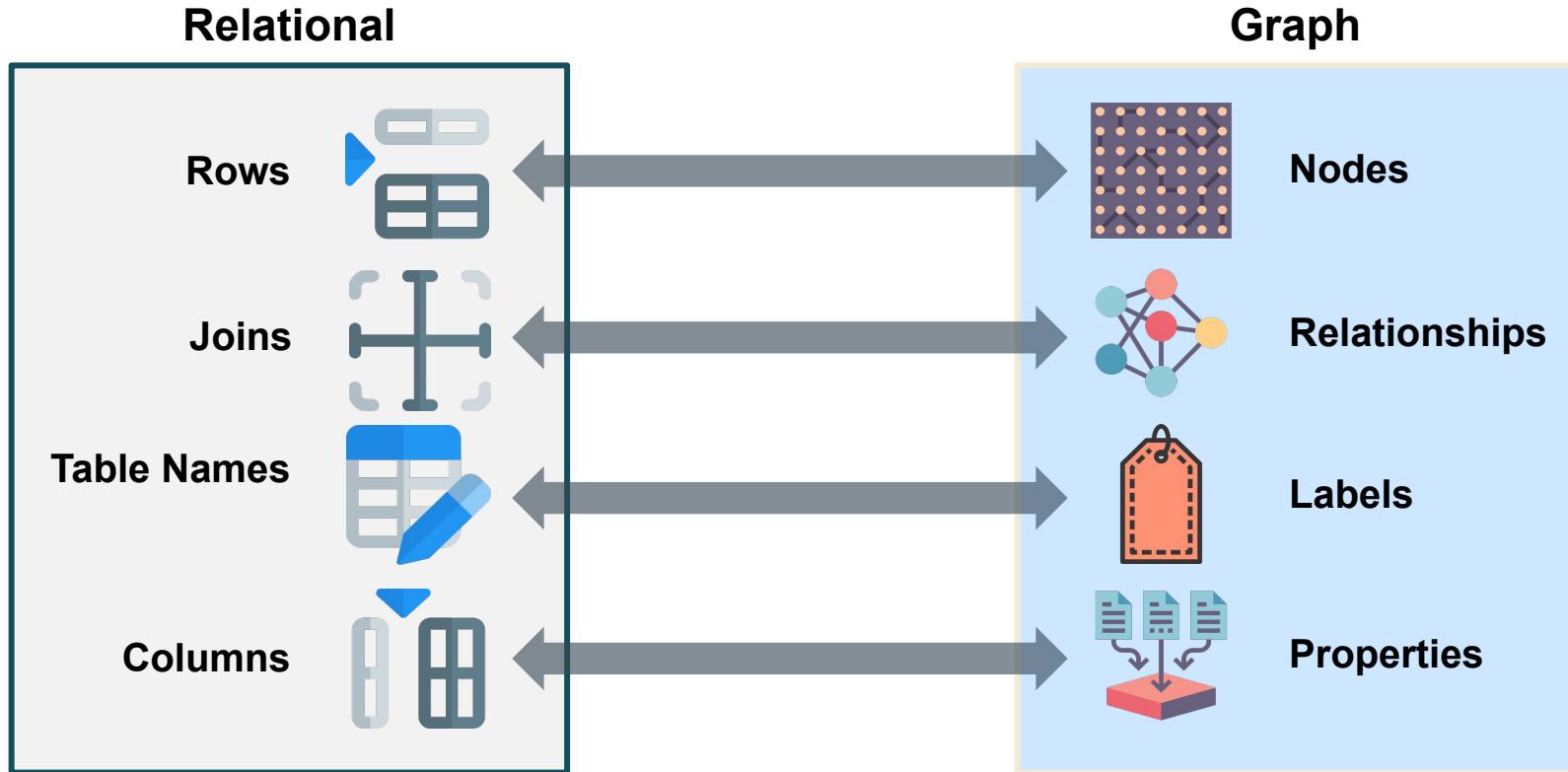
Writing

Writing to Neo4j

```
// Find or create using MERGE
MERGE (p:Person {name: "Siddhant Agarwal"})
MERGE (m:Movie {title: "GoldenEye"})
MERGE (p)-[d:DIRECTED]->(m)
SET d.roles = "AssistantDirector"
```



Conceptual Mapping Relational → Graph



Popular Graph Use Cases



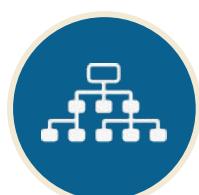
Real-Time
Recommendations



Fraud
Detection



Network &
IT Operations



Master Data
Management



Risk &
Compliance



Identity & Access
Management



Setting up the system

Step 1

Claim credits

Step2

Create a
Google Cloud
project



<https://trygcp.dev/e/bwai-graph-db>

Open this URL

You will need to be signed in

Click on “Sign in with Google” button

Google Cloud



Sign in with Google



Please sign in

Awesome Event

You will need to be signed in

You should see a similar page. Click on this button



[Sign out](#)

Hi, welcome Cloud Developer (`cloud-dev@gmail.com`)

Awesome Event

Your credit will allow you to use Google Cloud [Free Tier products](#).

It has an amount of **\$1**.

Once redeemed, it will be valid for **180 days** or until the balance is depleted if you use non-free services.

[CLICK HERE TO ACCESS YOUR CREDITS](#)



After redeeming your credit in the Google Cloud console, please [proceed to the next step](#).

Make sure that you are applying for the correct account

GCP credit application

Fill in the following information below to apply GCP credits to your account listed below.

First name *
Amazing

Last name *
Person

Account email
cloud-dev@gmail.com

Credits will be applied to this account. If you'd like to apply credits to a different account, specify your preference [here](#).

Coupon code
JKT-50BF-8FM9-KD8N

Terms and conditions

The following terms and conditions apply to the credit you received for Google Cloud products (the "Credit(s)").

The Credit is subject to valid registration and acceptance of an account with Google Cloud and satisfaction of any applicable eligibility requirements including the Google Cloud Platform [Terms of Service](#). You will be responsible for all usage in excess of the Credit and you may not be notified once the Credit is exhausted. The Credit is non-transferable and may not be sold or bartered. The Credit is valid for a limited time only and expires on the date indicated when you receive the applicable Credit code or on such date as designated by Google (in which case the earlier date applies). You may not use the Credit to engage in mining cryptocurrency unless you have obtained Google's written consent, which consent may be revoked by Google in its sole discretion at any time. Google reserves the right to cancel the Credit or change these terms at any time. You are responsible for determining the applicable tax treatment of receiving the Credits and for paying all applicable taxes. Offer void where prohibited by law.

Except for graduate or work-study students participating in an event in their personal capacities, if you are a government employee, including an employee of a public university, public educational institution or state-owned enterprise, you may not use (and you are ineligible to receive) any Credits.

ACCEPT AND CONTINUE

* Indicates required

Click on "Accept and Continue" to proceed

Step 1

Claim credits

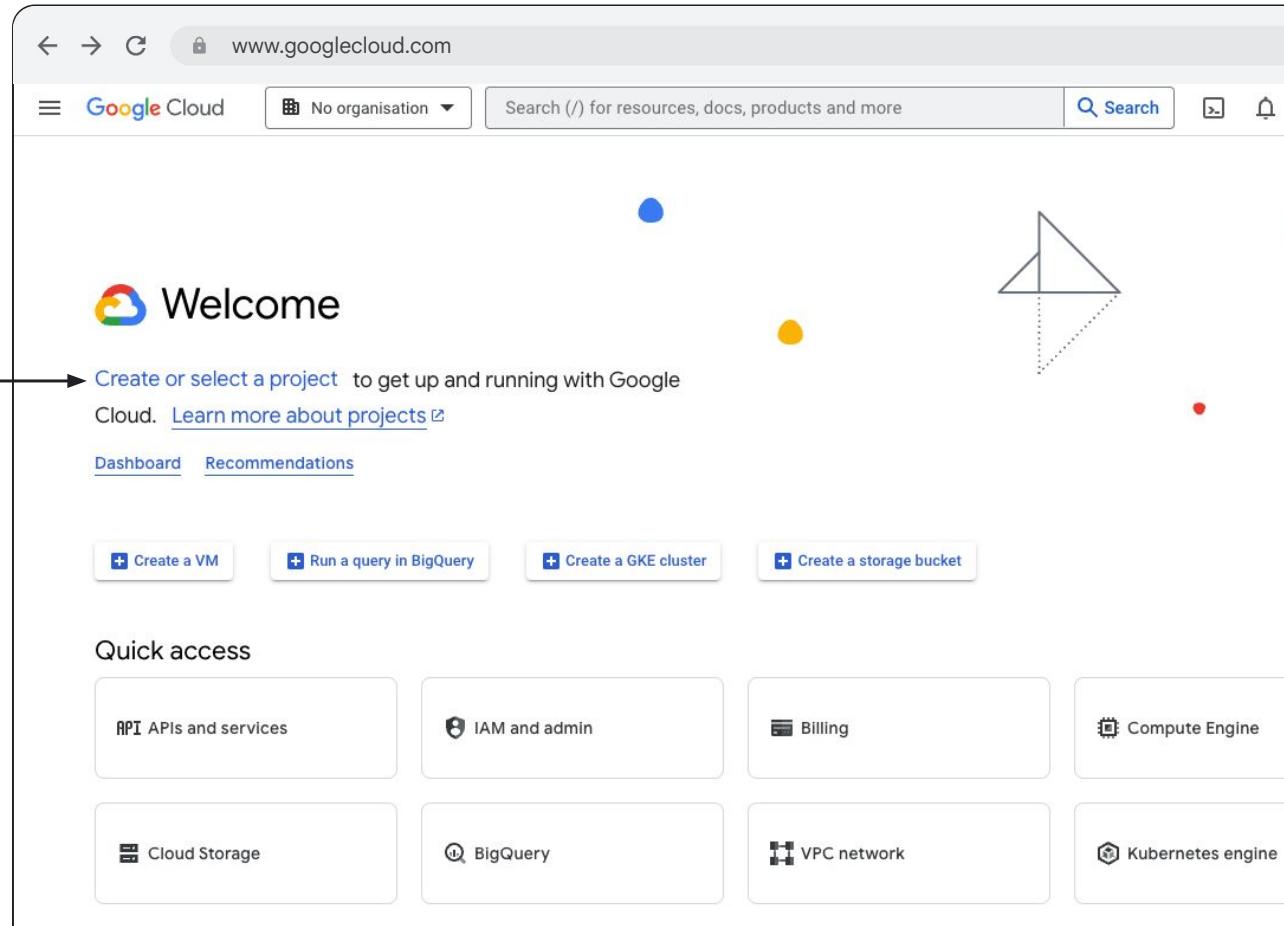
Step2

Create a
Google Cloud
project

Go to:

console.cloud.google.com

Click on “Create or select a project”



The screenshot shows the Google Cloud Welcome page at www.googlecloud.com. The page features a "Welcome" header with a cloud icon, a central text area with a call to action to "Create or select a project", and a "Quick access" section with various service icons.

Google Cloud Welcome

Create or select a project to get up and running with Google Cloud. [Learn more about projects](#)

[Dashboard](#) [Recommendations](#)

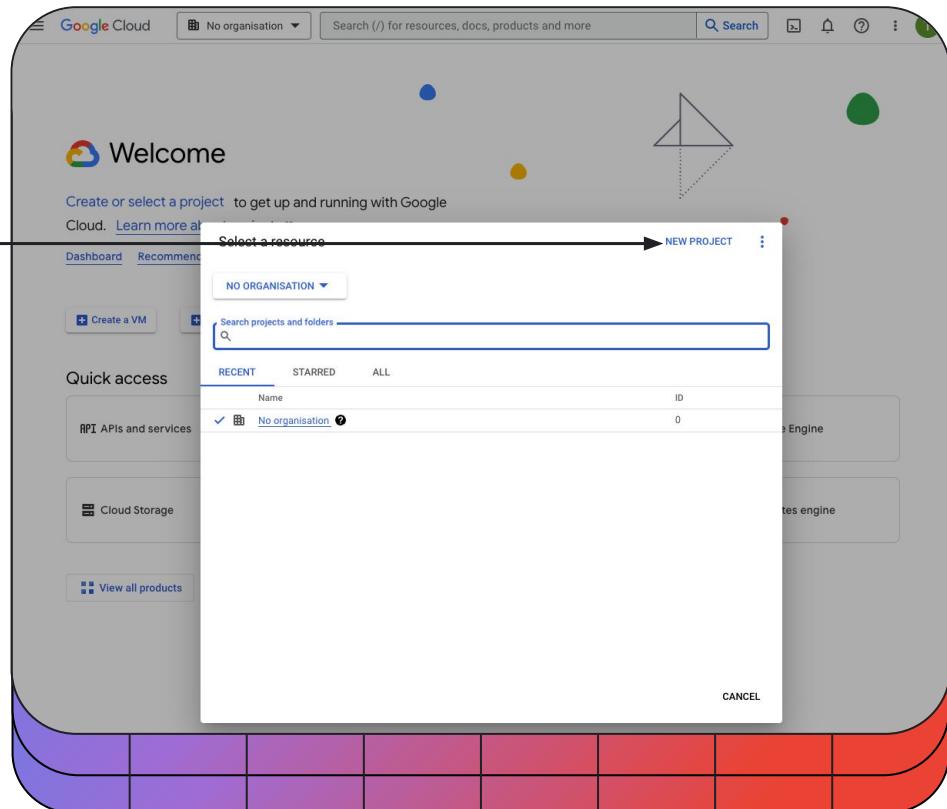
[Create a VM](#) [Run a query in BigQuery](#) [Create a GKE cluster](#) [Create a storage bucket](#)

Quick access

API APIs and services	IAM and admin	Billing	Compute Engine
Cloud Storage	BigQuery	VPC network	Kubernetes engine

Creating a new project

Click on “New Project”



Creating a new project

Name your project

If you see a billing account, make sure to select the “Trial Billing Account”. If NOT, still create the project and go to next slide

Click “CREATE”

New Project

⚠ You have 23 projects remaining in your quota. Request an increase or delete projects. [Learn more ↗](#)

[MANAGE QUOTAS ↗](#)

Project name * ?

Project ID: awesome-project-402007. It cannot be changed later. [EDIT](#)

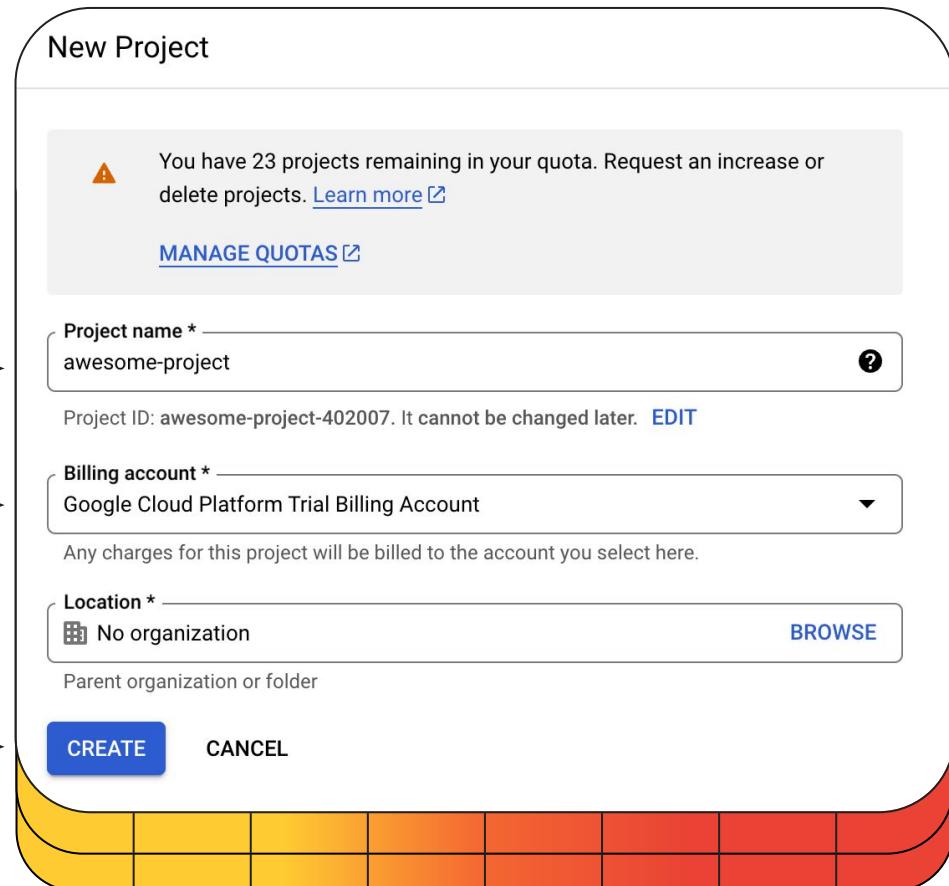
Billing account * ▼

Any charges for this project will be billed to the account you select here.

Location * BROWSE

Parent organization or folder

CREATE **CANCEL**



If you don't see a billing account in the previous step:

- 1) Go to Billing from Google Cloud Console and
- 2) Set your project's billing account to **Google Cloud Platform Trial Billing Account**



Set the billing account for project "My First Project"

This project pays for both Google Cloud Platform and Maps Platform. Select a billing account that supports both Google Cloud Platform and Maps Platform. [Learn more](#)

Billing account *

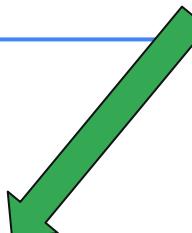
Google Cloud Platform Trial Billing Account



Any charges for this project will be billed to the account you select here.

CANCEL

SET ACCOUNT



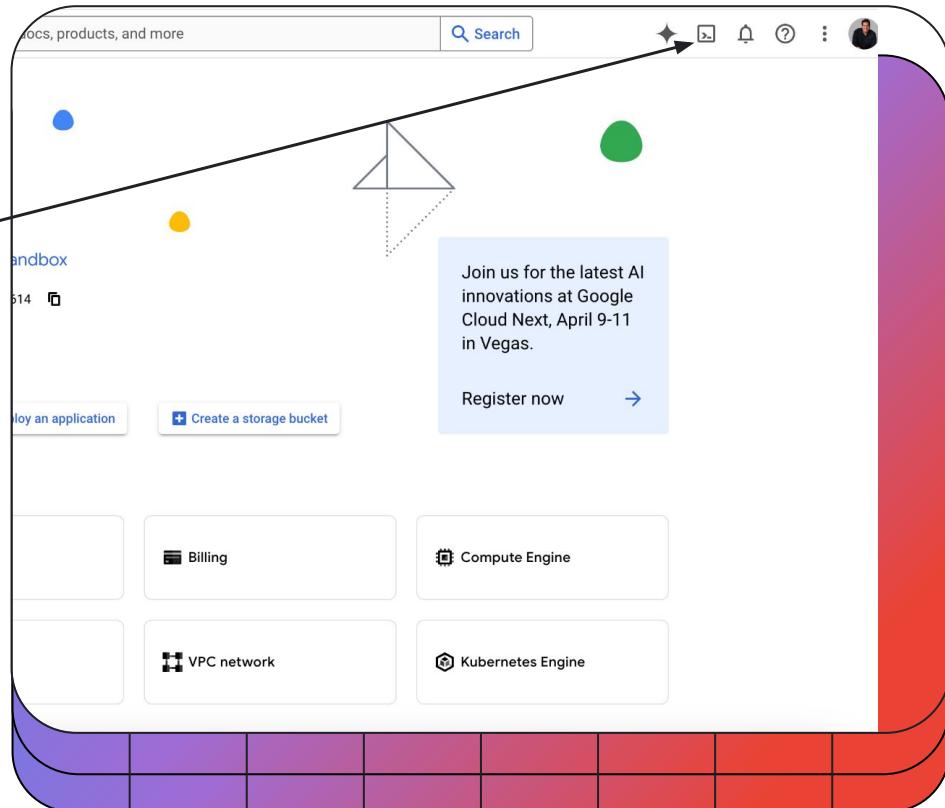
Codelab Time!



bit.ly/codelab-movies-vertexai

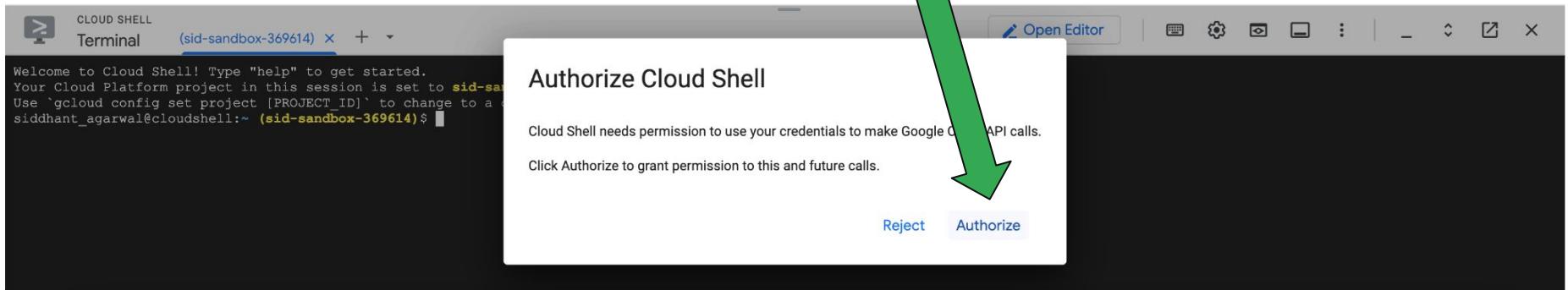
Open Google Cloud Shell

Click on this button



Authorize Google Cloud Shell

Click on “Authorize” button



Clone GitHub Repository

```
git clone  
https://github.com/sidagarwal04/neo4j-vertexai-codelab.git
```



A screenshot of a Cloud Shell terminal window. The title bar shows "CLOUD SHELL" and "Terminal (sid-sandbox-369614)". The main area displays a terminal session where the user runs the "git clone" command to clone a GitHub repository. The output shows the progress of cloning, including object enumeration, counting, compressing, and receiving objects, and finally resolving deltas.

```
siddhant_agarwal@cloudshell:~ (sid-sandbox-369614)$ git clone https://github.com/sidagarwal04/neo4j-vertexai-codelab.git
Cloning into 'neo4j-vertexai-codelab'...
remote: Enumerating objects: 188, done.
remote: Counting objects: 100% (85/85), done.
remote: Compressing objects: 100% (44/44), done.
remote: Total 188 (delta 54), reused 50 (delta 41), pack-reused 103 (from 1)
Receiving objects: 100% (188/188), 22.43 MiB | 11.93 MiB/s, done.
Resolving deltas: 100% (87/87), done.
siddhant_agarwal@cloudshell:~ (sid-sandbox-369614)$ █
```

Change the current working directory

cd neo4j-vertexai-codelab/

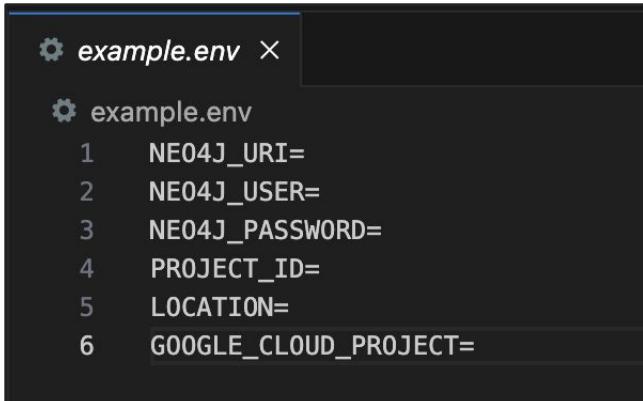


A screenshot of a Cloud Shell terminal window. The title bar shows "CLOUD SHELL" and "Terminal (sid-sandbox-369614)". The main area displays a command-line session:

```
siddhant_agarwal@cloudshell:~ (sid-sandbox-369614)$ cd neo4j-vertexai-codelab/
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ ls -a
.  app.py  Dockerfile  example.env  generate_embeddings.py  .git  .gitignore  LICENSE  movie_embeddings.csv  README.md
.. chatbot.py  .DS_Store  export_embeddings_to_csv.py  generate_embeddings_to_csv.py  .gitattributes  graph_build.py  load_embeddings.py  normalized_data  requirements.txt
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$
```

Create a copy of example.env and rename it as .env

```
cp example.env .env
```





CLOUD SHELL

Terminal (sid-sandbox-369614) x +

`siddhant_agarwal@cloudshell:~ (sid-sandbox-369614)$ cd neo4j-vertexai-codelab/
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ ls -a
. app.py Dockerfile example.env generate_embeddings.py .git .gitignore LICENSE movie_embeddings.csv README.md
.. chatbot.py .DS_Store export_embeddings_to_csv.py generate_embeddings_to_csv.py .gitattributes graph_build.py load_embeddings.py normalized_data requirements.txt
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ cp example.env .env
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ ls -a
. chatbot.py .env generate_embeddings.py .gitattributes LICENSE normalized_data
.. Dockerfile example.env generate_embeddings_to_csv.py .gitignore load_embeddings.py README.md
app.py .DS_Store export_embeddings_to_csv.py .git graph_build.py movie_embeddings.csv requirements.txt
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$`

Edit .env

vi .env

```
.env
.
.
.
1 NE04J_URI=neo4j+s://8a956b84.databases.neo4j.io
2 NE04J_USER=neo4j
3 NE04J_PASSWORD=6mDT6JsRnjlPokmgVh52y-Gbr2ptq828EAGJoplzNrs
4 PROJECT_ID=
5 LOCATION=
6 GOOGLE_CLOUD_PROJECT=
```

- Press i to enter insert mode
- Make your changes
- Press Esc, then type :wq to write (save) and quit
- You can keep PROJECT_ID, LOCATION and GOOGLE_CLOUD_PROJECT as blank

CLOUD SHELL Terminal (sid-sandbox-369614) + ⋮

Open Editor

```
siddhant_agarwal@cloudshell:~ (sid-sandbox-369614)$ cd neo4j-vertexai-codelab/
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ ls -a
. app.py Dockerfile example.env generate_embeddings.py .git .gitignore LICENSE movie_embeddings.csv README.md
.. chatbot.py .DS_Store export_embeddings_to_csv.py generate_embeddings_to_csv.py .gitattributes graph_build.py load_embeddings.py normalized_data requirements.txt
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ cp example.env .env
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ ls -a
. chatbot.py .env generate_embeddings.py .gitattributes LICENSE normalized_data
.. Dockerfile example.env generate_embeddings_to_csv.py .gitignore load_embeddings.py README.md
app.py .DS_Store export_embeddings_to_csv.py .git graph_build.py movie_embeddings.csv requirements.txt
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$
```

Install requirements/necessary libraries

pip install -r requirements.txt

≡ requirements.txt ×

≡ requirements.txt

```
1 gradio>=4.0.0
2 neo4j>=5.0.0
3 numpy>=1.20.0
4 python-dotenv>=1.0.0
5 google-cloud-aiplatform>=1.30.0
6 vertexai>=0.0.1
```

CLOUD SHELL Terminal (sid-sandbox-369614) + ▾

Open Editor

```
siddhant_agarwal@cloudshell:~/neo4j-vertexai-codelab (sid-sandbox-369614)$ pip install -r requirements.txt
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: gradio>=4.0.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from -r requirements.txt (line 1)) (5.21.0)
Requirement already satisfied: neo4j>=5.0.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from -r requirements.txt (line 2)) (5.28.1)
Requirement already satisfied: numpy>=1.20.0 in /usr/local/lib/python3.12/dist-packages (from -r requirements.txt (line 3)) (2.0.2)
Requirement already satisfied: python-dotenv>=1.0.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from -r requirements.txt (line 4)) (1.0.1)
Requirement already satisfied: google-cloud-aiplatform>=1.30.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from -r requirements.txt (line 5)) (1.71.1)
Requirement already satisfied: vertexai>=0.0.1 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from -r requirements.txt (line 6)) (1.71.1)
Requirement already satisfied: aiofiles<24.0,>=22.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (23.2.1)
Requirement already satisfied: anyio<5.0,>=3.0 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (4.9.0)
Requirement already satisfied: fastapi<1.0,>=0.115.2 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (0.115.11)
Requirement already satisfied: ffmpy in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (0.5.0)
Requirement already satisfied: gradio-client==1.7.2 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (1.7.2)
Requirement already satisfied: groovy~=0.1 in /home/siddhant_agarwal/.local/lib/python3.12/site-packages (from gradio>=4.0.0->-r requirements.txt (line 1)) (0.1.2)
```

ROUNAK BANIK · UPDATED 7 YEARS AGO



3708



Code



Download



The Movies Dataset

Metadata on over 45,000 movies. 26 million ratings from over 270,000 users.



[Data Card](#) [Code \(684\)](#) [Discussion \(41\)](#) [Suggestions \(2\)](#)

About Dataset

Context

These files contain metadata for all 45,000 movies listed in the Full MovieLens Dataset. The dataset consists of movies released on or before July 2017. Data points include cast, crew, plot keywords, budget, revenue, posters, release dates, languages, production companies, countries, TMDB vote counts and vote averages.

This dataset also has files containing 26 million ratings from 270,000 users for all 45,000 movies. Ratings are on a scale of 1-5 and have been obtained from the official GroupLens website.

Content

This dataset consists of the following files:

movies_metadata.csv: The main Movies Metadata file. Contains information on 45,000 movies featured in the Full MovieLens dataset. Features include posters, backdrops, budget, revenue, release dates, languages, production countries and companies.

keywords.csv: Contains the movie plot keywords for our MovieLens movies. Available in the form of a stringified JSON Object.

Usability

8.24

License

CC0: Public Domain

Expected update frequency

Not specified

Tags

Earth and Nature

Movies and TV Shows

Popular Culture

Load movie, actor, director data into Neo4j

python graph_build.py

Database information

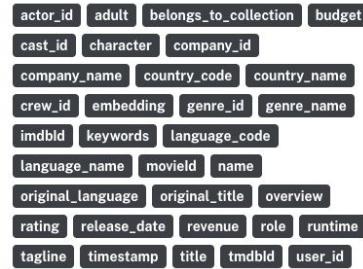
Nodes (112,854)



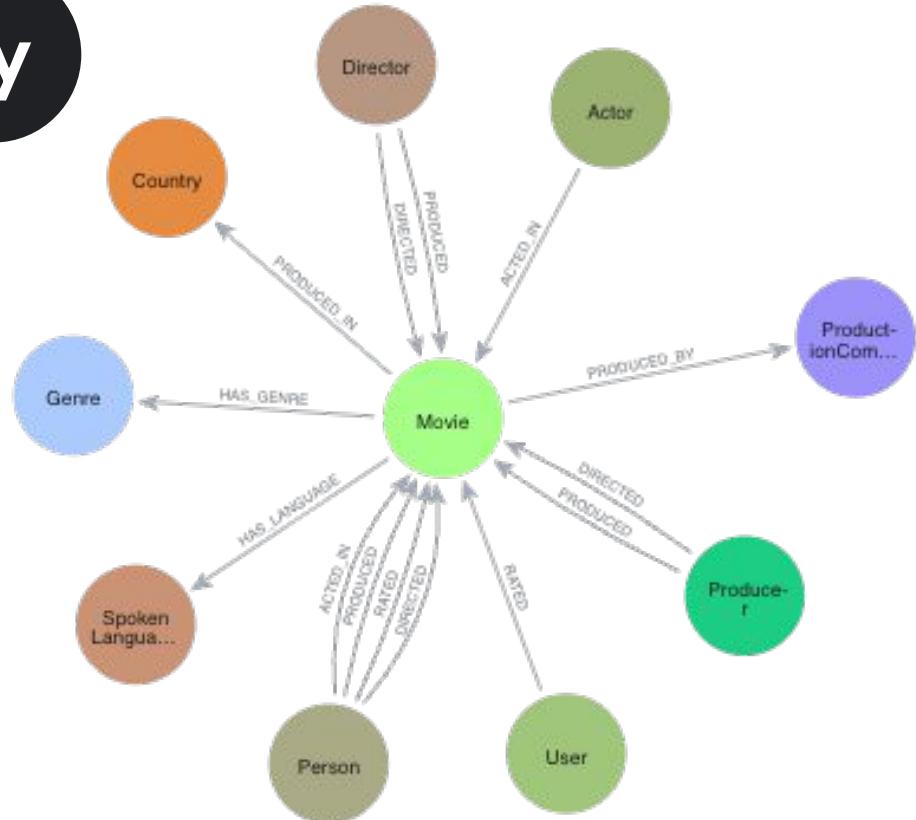
Relationships (375,760)



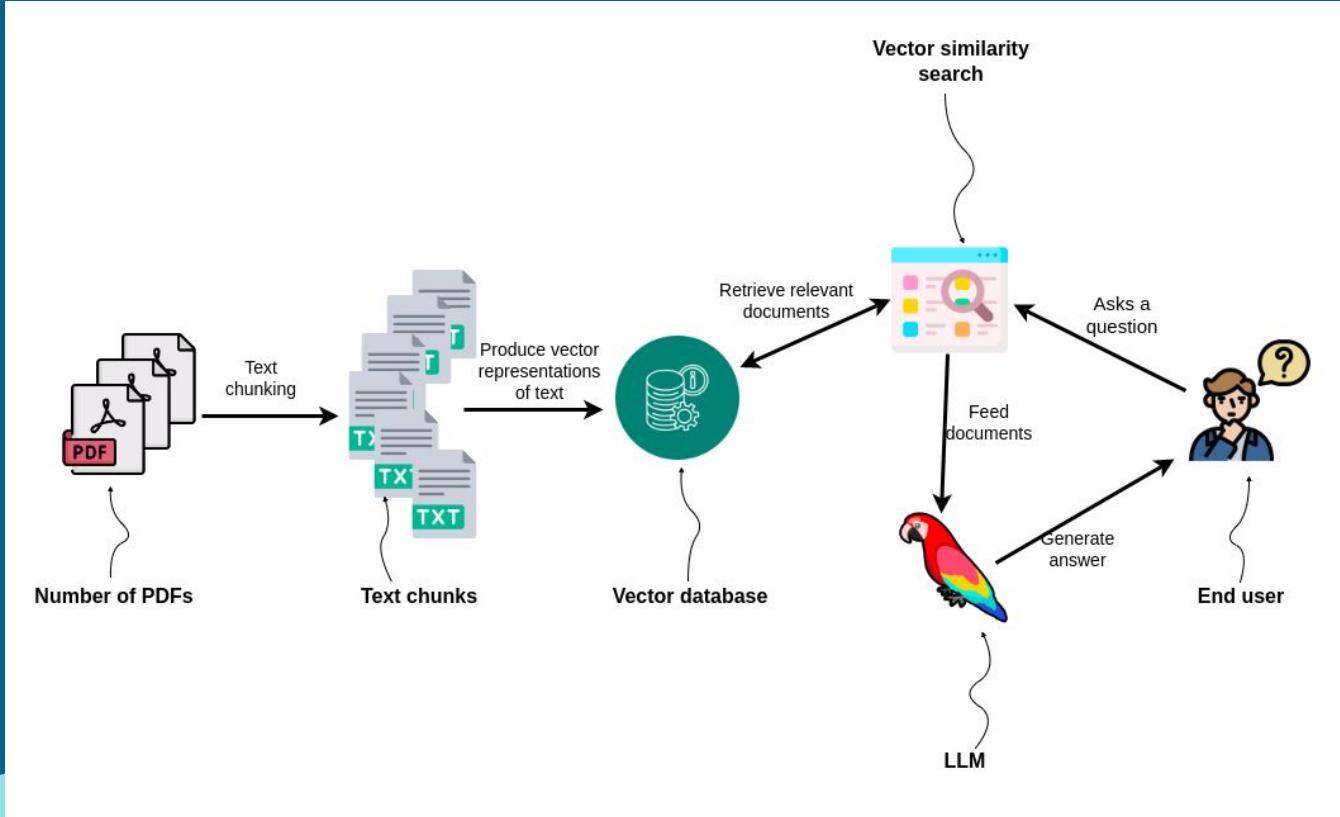
Property keys



Show less



Vector RAG

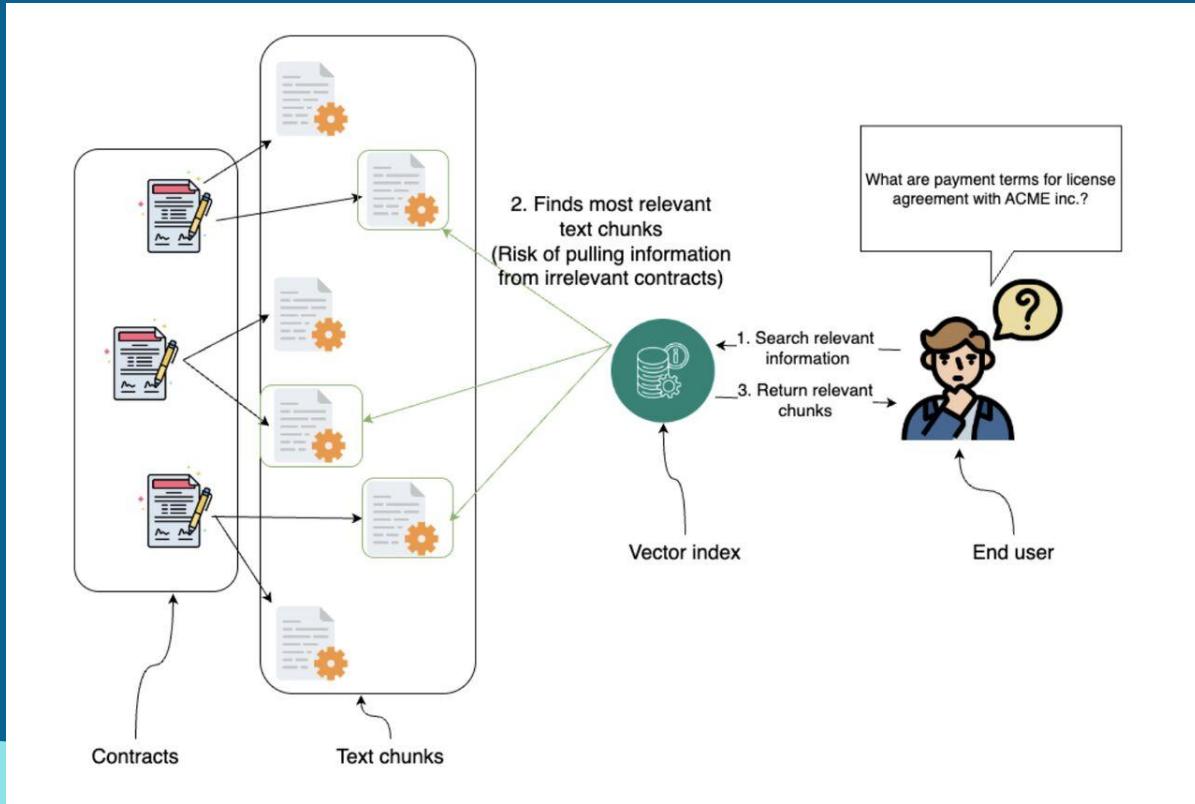


Load embeddings

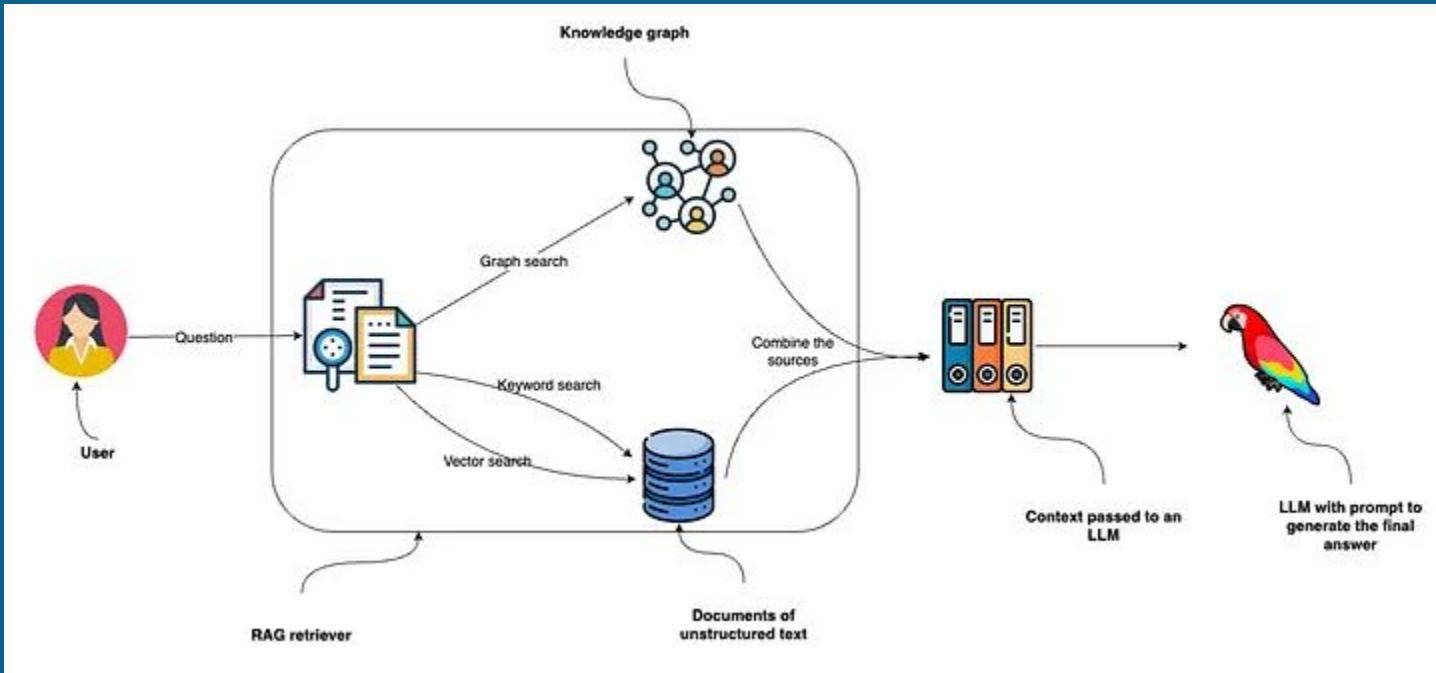
python load_embeddings.py

```
LOAD CSV WITH HEADERS FROM  
'https://storage.googleapis.com/neo4j-vertexai-codelab/movie_embeddings.csv' AS row  
WITH row  
MATCH (m:Movie {tmdbId: tolnteger(row.tmdbId)})  
SET m.embedding = apoc.convert.fromJsonList(row.embedding)
```

Why Vector RAG alone might fail miserably?



GraphRAG



Start Recommender Chatbot

python chatbot.py

AI Movie Recommendation System

Get personalized movie recommendations using semantic search with Neo4j vector search and Google Vertex AI!

Your movie preference

I'm in the mood for something with superheroes but not too serious

Clear **Submit**

Recommendations

Okay, I understand you're looking for some superhero movies that are on the lighter side. Based on your request, I think these movies might be right up your alley. They all have superhero elements but lean towards comedy, coming-of-age stories, or are just generally less intense than your typical superhero fare.

Let me tell you a little bit about them:

First up, we have **D.E.B.S. (2004)**. This one is a fun twist on the genre, focusing on a team of teenage crime fighters where the star agent actually falls for the villainess she's supposed to capture! It's got a quirky, lighthearted tone with a bit of a romantic comedy spin.

Then there's **Sky High (2005)**. It's set in a world where superheroes are the norm, and this follows a young man trying to live up to his superhero parents while navigating the ups and downs of high school. It's a really fun, family-friendly movie.

You might also enjoy **The Incredibles (2004)**. While it has action, it's also a hilarious and heartwarming story about a family of superheroes trying to adjust to normal suburban life. It touches on themes of family and mid-life crisis, but it's always done with a good sense of humor.

2 Giveaways

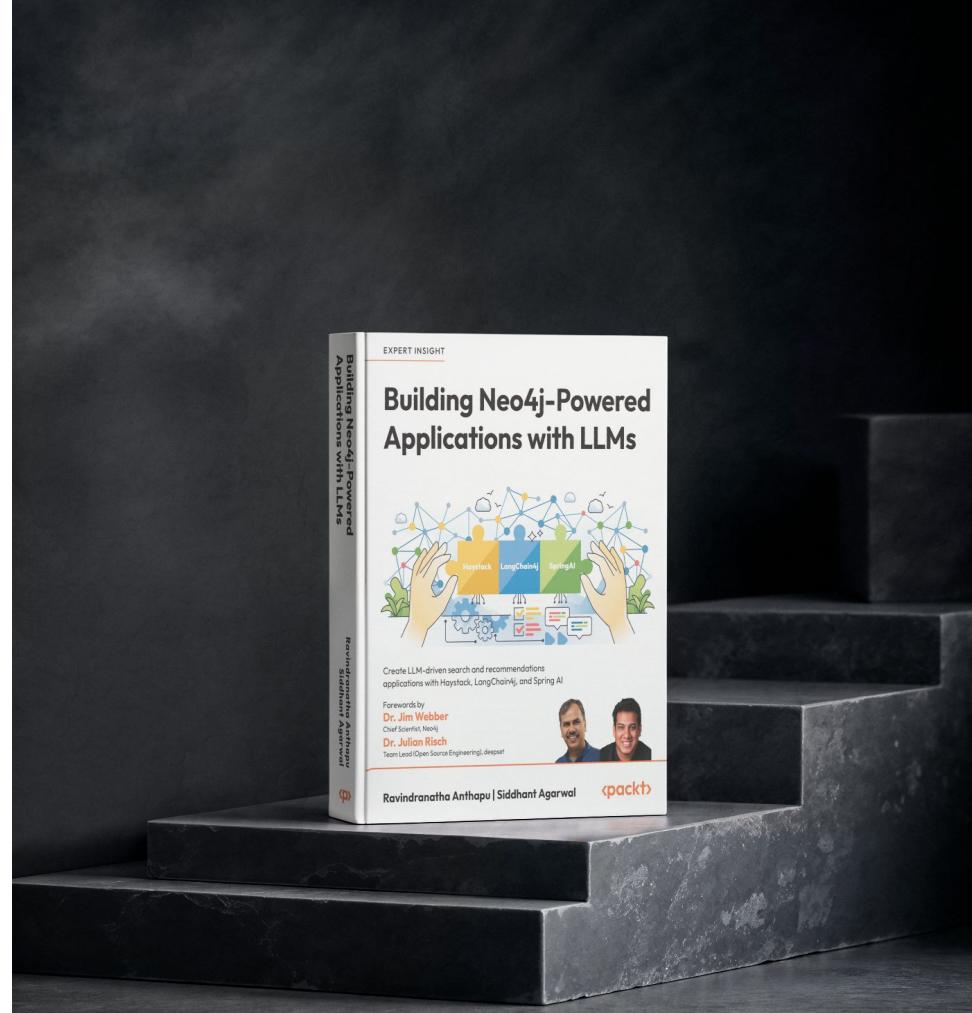


Q1: Find me a thriller where the villain is smarter than the hero

Q2: I want a sci-fi movie from the 80s, under 2 hours, with a strong female lead

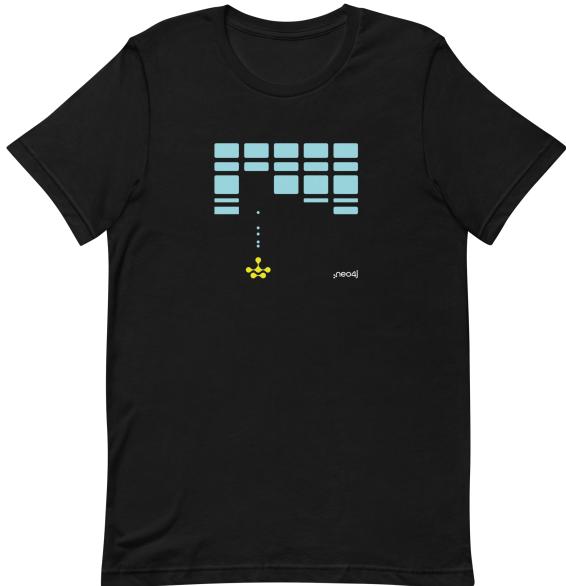
What needs to be done?

- Fix the chat prompt
- Raise a Github Issue
- Most innovative prompt and chat result will get the giveaway



Deploy Recommender Chatbot on Google Cloud Run (optional)

Follow the steps in the codelab



10 fastest deployments will get a t-shirt

Smart Movie Recommender with GraphRAG

Discover movies you'll love — powered by Neo4j and Vertex AI! This assistant combines semantic search with knowledge graph reasoning — using vector similarity for relevant matches and LLM-generated Cypher queries for deeper insights from movie plots, genres, and relationships.

Your movie preference

What kind of movie would you like to watch?

Clear Submit

Recommendations

Examples

Which time travel movies star Bruce Willis? Find romantic comedies directed by female directors.

Recommend sci-fi movies featuring AI and starring Keanu Reeves.

Show me thrillers from the 2000s with mind-bending plots. List superhero movies where the villain turns good.



<https://bit.ly/4ix8JpD>

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(Independent Community discussing Google AI Tech)

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Part of **Neo4j MeetUp - 31 groups** ⓘ

Graph Database Delhi/NCR

4.3 ★★★★☆ 29 ratings

📍 Delhi, India

👤 1,810 members · Public group ⓘ

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What we're about

Welcome to the **Graph Database Delhi/NCR User Group**, a group for anyone interested in exploring the intersection of graphs, artificial

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Live sessions from community and Neo4j experts - **24 hours** of technical talks **across all timezones**

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Frameworks, Data Platforms, Clouds and Beyond



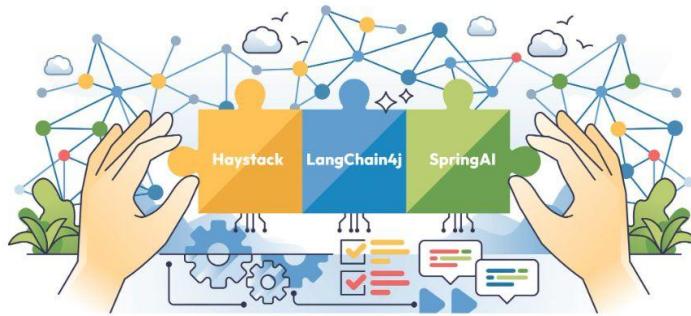
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EXPERT INSIGHT

Building Neo4j-Powered Applications with LLMs



Create LLM-driven search and recommendations applications with Haystack, LangChain4j, and Spring AI

Forewords by

Dr. Jim Webber

Chief Scientist, Neo4j

Dr. Julian Risch

Team Lead (Open Source Engineering), deepset



Ravindranatha Anthapur | Siddhant Agarwal

packt

Thank you!

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