

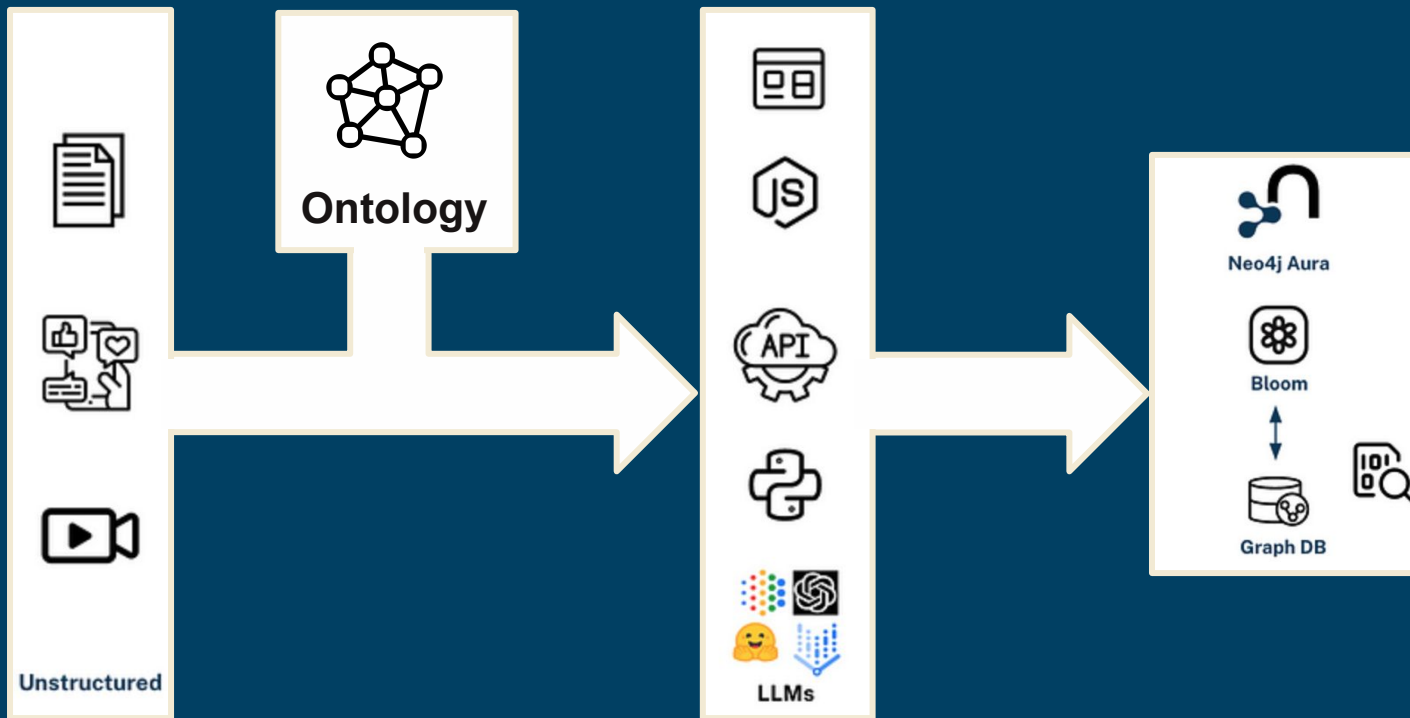
neo4j

Going Meta

S2 - Episode 1

Using Ontologies to guide
Knowledge Graph Creation
from Unstructured Data

What does it mean?



The LLM Knowledge Graph Builder

The screenshot shows the Neo4j Labs website with the 'LLM Graph Builder' page selected in the left sidebar. The main content area is titled 'Neo4j LLM Knowledge Graph Builder - Extract Nodes and Relationships from Unstructured Text'. It features a '3 Simple Steps' section with a diagram: 1. Connect to Neo4j, 2. Upload Files (PDF, YouTube, local documents, etc.), 3. Generate Graph. Below this, it explains that the tool uses ML models (LLM-OpenAI, Gemini, Llama3, Diffbot, Claude, Qwen) to transform various inputs into a knowledge graph. A 'Contents' sidebar on the right lists sections like 'Step by Step Instructions', 'How it works', 'Relevant Links', 'Installation', 'Videos & Tutorials', 'Detailed Walk-Through', 'LiveStream LLM-Knowledge Graph Builder', and 'Learn'. A 'Start learning' button is also present.

Neo4j Labs

Neo4j Labs / GenAI Ecosystem / Example Projects / LLM Graph Builder

Neo4j LLM Knowledge Graph Builder - Extract Nodes and Relationships from Unstructured Text

Automatically Build a KG for GenAI

3 Simple Steps

1. Connect to Neo4j
2. Upload Files (PDF, YouTube, local documents, etc.)
3. Generate Graph

The Neo4j LLM Knowledge Graph Builder is an [online application](#) for turning unstructured text into a knowledge graph. It provides a magical text to graph experience.

It uses ML models (LLM-OpenAI, Gemini, Llama3, Diffbot, Claude, Qwen) to transform PDFs, documents, images, web pages, and YouTube video transcripts. The extraction turns them into a lexical graph of documents and chunks (with embeddings) and an entity graph with nodes and their relationships, which are both stored in your Neo4j database. You can configure the extraction schema and apply clean-up operations after the extraction.

Afterwards you can use different RAG approaches (GraphRAG, Vector, Text2Cypher) to ask questions of your data and see how the extracted data is used to construct the answers.

- best results for files with long-form text in English
- less well suited for tabular data like Excel or CSV or images/diagrams/slides

Contents

- Step by Step Instructions
- How it works
- Relevant Links
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- Videos & Tutorials
- Detailed Walk-Through
- LiveStream LLM-Knowledge Graph Builder
- Learn

Free Neo4j LLM courses from GraphAcademy

Learn everything you need to know to build GenAI applications with LangChain and Neo4j

[Start learning](#)

<https://neo4j.com/labs/genai-ecosystem/llm-graph-builder/>

<https://github.com/neo4j-labs/llm-graph-builder>

The screenshot shows the GitHub repository page for 'neo4j-labs / llm-graph-builder'. The repository is public and has 17 people watching. It shows a list of files and folders, including 'POC_Documents/V1', 'POC_Experiments', 'backend', 'data', 'docs', 'experiments', 'frontend', '.gitignore', 'LICENSE', 'README.md', 'docker-compose.yml', and 'example.env'. The 'README' file is selected, showing the title 'Knowledge Graph Builder App' and the description 'Creating knowledge graphs from unstructured data'. The 'LLM Graph Builder' section is highlighted. The 'Overview' section states that the application is designed to turn unstructured data (pdfs, docs, txt, youtube video, web pages, etc.) into a knowledge graph stored in Neo4j. It utilizes the power of Large language models (OpenAI, Gemini, etc.) to extract nodes, relationships and their properties from the text and create a structured knowledge graph using Langchain framework. A 'Contributors' section shows 20 contributors, and a 'Languages' section shows the distribution of code languages: Jupyter Notebook (43.7%), TypeScript (35.8%), Python (18.8%), Ref (0.7%), Dockerfile (0.2%), and Other (0.1%).

neo4j-labs / llm-graph-builder

<> Code Issues 68 Pull requests 8 Actions Projects 1 Security Insights

llm-graph-builder Public

Stop ignoring 21 Fork 284 Star 2k

main Staging (#771) 1s2842 last week

Go to file + Code

About

Neo4j graph construction from unstructured data using LLMs

neo4j.com/labs/genai-ecosyst...

neo4j graph data-import knowledge-graph graphdb graph-search unstructured-data rag langchain vectordb genai graph-rag graphrag

Readme Apache-2.0 license Activity Custom properties 2k stars 21 watching 284 forks Report repository

Contributors 20

Languages

Jupyter Notebook 43.7% TypeScript 35.8% Python 18.8% Ref 0.7% Dockerfile 0.2% Other 0.1%

Knowledge Graph Builder App

Creating knowledge graphs from unstructured data

LLM Graph Builder


python javascript typescript

Overview

This application is designed to turn Unstructured data (pdfs, docs, txt, youtube video, web pages, etc.) into a knowledge graph stored in Neo4j. It utilizes the power of Large language models (OpenAI, Gemini, etc.) to extract nodes, relationships and their properties from the text and create a structured knowledge graph using Langchain framework.


Upload your files from local machine, GCS or S3 bucket or from web sources.

The LLM Knowledge Graph Builder

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[\(Neo4j Developer Blog\) - \[BACK\]](#)

LLM Knowledge Graph Builder: From Zero to GraphRAG in Five Minutes

 Morgan Sénéchal, Principal Consultant, Neo4j

Jun 19 · 8 mins read

Extract and use knowledge graphs in your GenAI applications with the LLM Knowledge Graph Builder.



The LLM Knowledge Graph Builder is one of Neo4j's GraphRAG Ecosystem Tools that empowers you to transform unstructured data into dynamic knowledge graphs. It is integrated with a Retrieval-Augmented Generation (RAG) chatbot, enabling natural language querying and explainable insights into your data.

Read: [Get Started With GraphRAG: Neo4j's Ecosystem Tools](#)

What Is the Neo4j LLM Knowledge Graph Builder?

The Neo4j LLM Knowledge Graph Builder is an innovative [online application](#) for turning unstructured text into a knowledge graph with no code and no Cypher, providing a magical text-to-graph

 Search



Knowledge Graph Builder App


Niels De Jong & Morgan Senechal

Neo4j Live: Knowledge Graph Builder App

 Neo4j
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343

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12K views Streamed 4 months ago #graphrag #llm #langchain

Let's turn PDF documents into dynamic knowledge graphs stored in Neo4j with an easy to use app!

<https://www.youtube.com/watch?v=NbyxWAC2TLc>

<https://neo4j.com/developer-blog/graphrag-llm-knowledge-graph-builder/>

The data sources


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LONDON'S BLUE PLAQUES

London's famous blue plaques link the people of the past with the buildings of the present. Now run by English Heritage, the London blue plaques scheme was started in 1866 and is thought to be the oldest of its kind in the world.

Across the capital 1,000 plaques, on buildings humble and grand, honour the notable women and men who have lived or worked in them. Discover some of the people commemorated with blue plaques, or search for a plaque, below.

The English Heritage London blue plaques scheme is generously supported by David Pearl and members of the public.



FIND A PLAQUE

eg. Actor or Charles Dickens


London borough

All London Boroughs


Category

All Categories


SEARCH
 >




HANDEL, GEORGE FRIDERIC (1685-1759)
Composer
25 Brook Street, Mayfair, London, W1K 4-B, City Of Westminster




HENDRIX, JIMI (1942-1970)
Guitarist, Songwriter
23 Brook Street, Mayfair, London, W1K 4-B, City Of Westminster




LENNON, JOHN (1940-1980)
Musician, Songwriter
21 Portico Square, Marylebone, London, W1H 2JJ, City Of Westminster



MATER, SIR ROBERT (1879-1955)
Philanthropist, Patron of Music
21 Handeld Street, Marylebone, London, W1G 9NF, City Of Westminster



MENDELSSOHN, FELIX (1809-1847)
Composer
4 Hobart Place, Belgravia, London, SW1W 0HL, City Of Westminster



MOZART, WOLFGANG AMADEUS (1756-1791)
Composer
180 Ebury Street, Belgravia, London, SW1W 8LP, City Of Westminster

HENDRIX, JIMI (1942-1970)

Plaque erected in 1997 by English Heritage at 23 Brook Street, Mayfair, London, W1K 4HA, City of Westminster



All images © English Heritage

Profession	Guitarist, Songwriter
Category	Music and Dance
Inscription	JIMI HENDRIX 1942-1970 Guitarist and Songwriter lived here 1968-1969
Material	Ceramic

The guitarist and songwriter Jimi Hendrix became an overnight sensation with the release of his band's first single, 'Hey Joe', in 1966. His innovative fusion of blues and experimental rock – coupled with his extraordinary live performances – has continued to have a profound influence on popular music long after his death.

HENDRIX IN LONDON

Born in Seattle, Washington, USA, James Marshall Hendrix spent the most successful years of his working life in London. He first arrived in the capital in September 1966, three months after having been 'discovered' by the British musician Chas Chandler, who had been impressed by Hendrix's innovative guitar style and dynamic stage presence. By October, the Jimi Hendrix Experience had been created – with Noel Redding on bass and Mitch Mitchell on drums.

The band's first single, 'Hey Joe', was met with acclaim, while the second, 'Purple Haze', became Jimi's signature tune. 1967 saw virtually constant touring in Britain, Europe and America and the release of the Experience's first albums, *Are You Experienced* and *Axis: Bold as Love*. With these records Hendrix explored and then broke all previous boundaries of the electric guitar: it was his innovative twist on rock 'n' roll that paved the way for many acts of the 1970s and onwards.

In 1968 Hendrix joined his girlfriend, Kathy Etchingham (b. 1946), at the flat she had taken in June on the top two floors of number 23 Brook Street. Jimi lived in the flat for some months – helping to decorate and furnish it to his own taste – before leaving to tour the USA in March 1969.

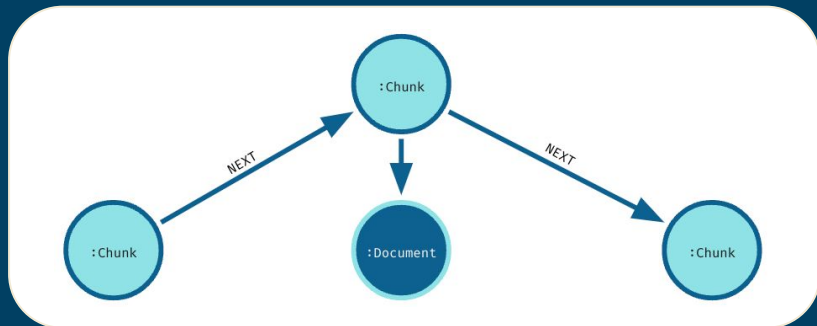
He was to return to London for only brief spells in 1970, spending his last night at the Samarkand Hotel, 22 Lansdowne Crescent in Notting Hill, where he died of a drug overdose at the age of just 27.



The resulting KG

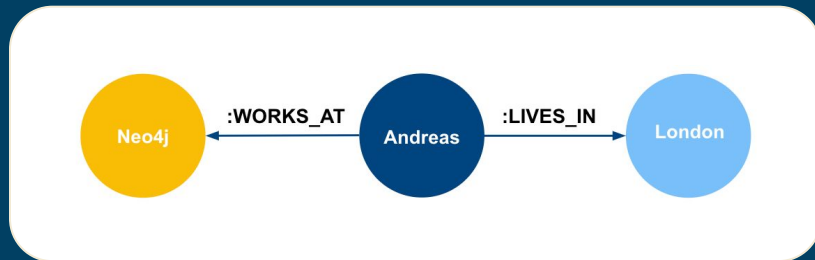
Document Structure Graph

A graph representation of for example the sections, paragraphs, chunks, documents and the relationships between them



Domain Graph

A graph representation of the real or digital world, i.e. the domain you're modeling



These two are not exhaustive
They're also complementary

Time to try it out!