Analytics Vidhya

Hands-On: Building a RAG System with Citations

Instructor

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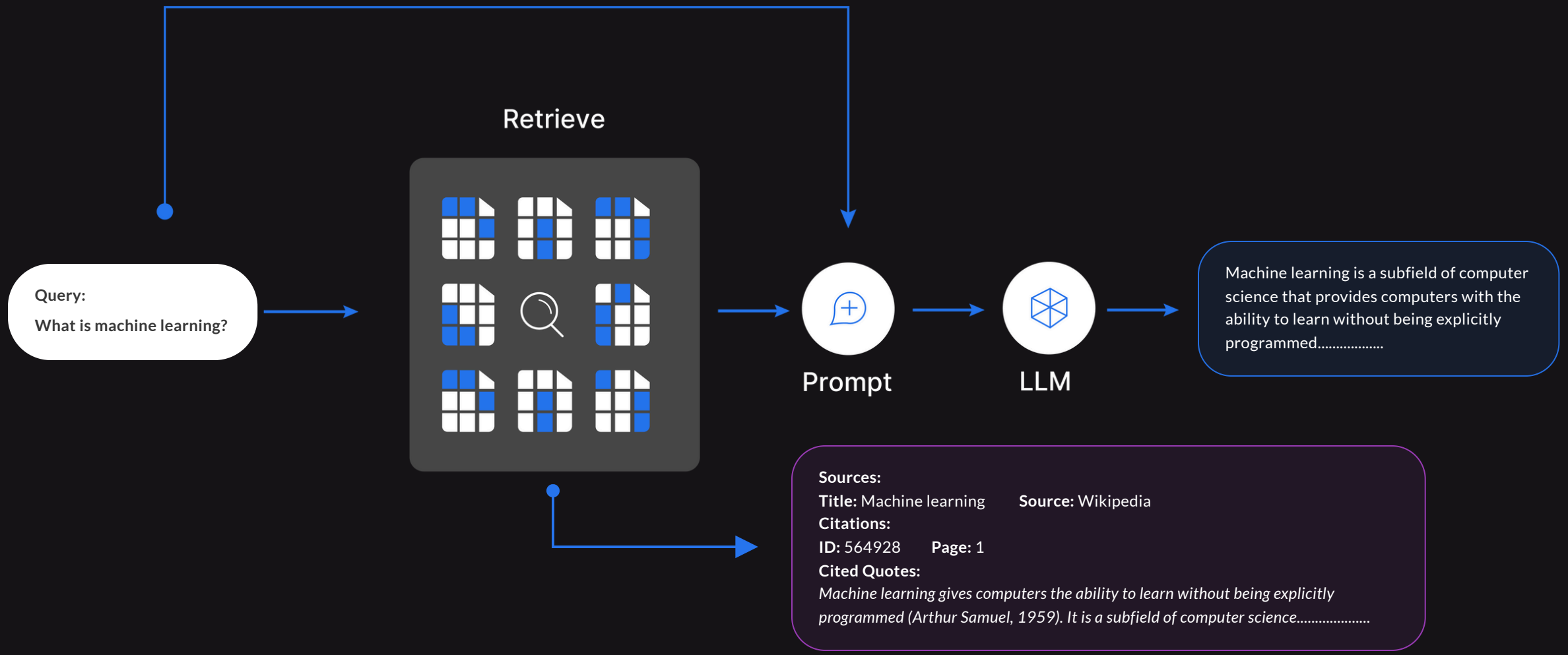
RAG System with Citations Workflow



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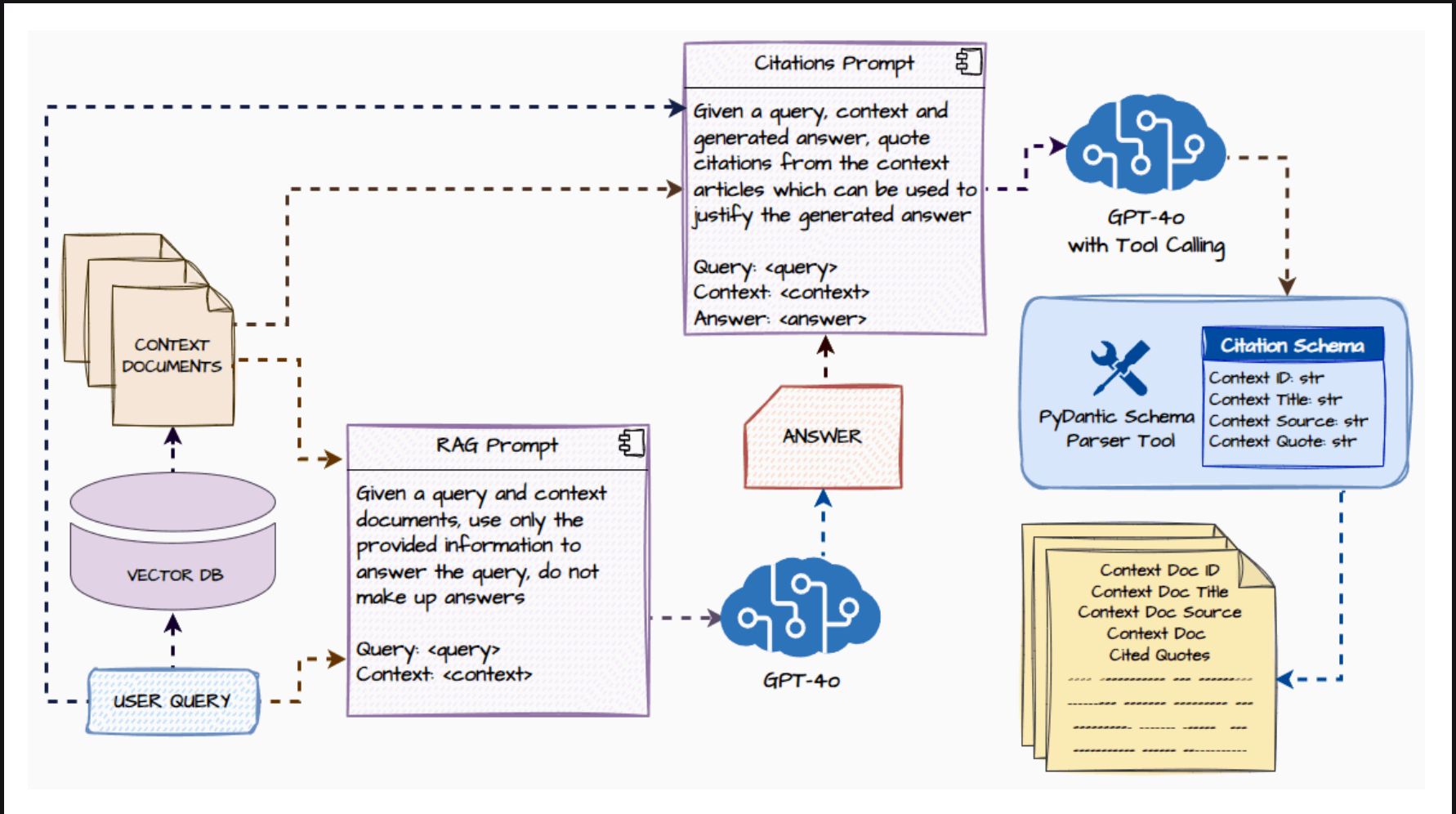
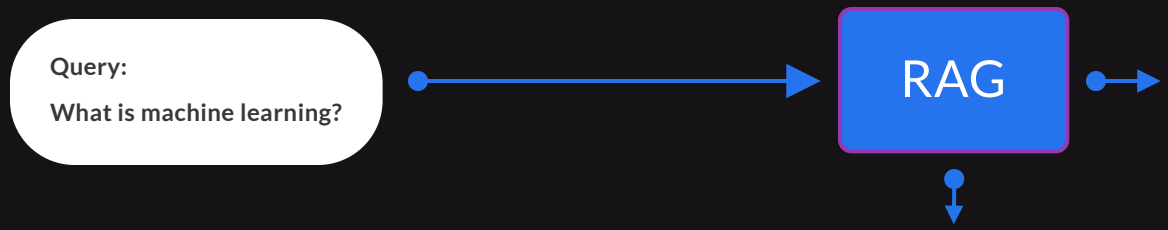
RAG System with Citations Workflow



RAG System with Citations Example



Response:

Machine learning is a subfield of computer science that provides computers with the ability to learn without being explicitly programmed. The concept was introduced by Arthur Samuel in 1959 and is rooted in the broader field of artificial intelligence (AI).

Machine learning focuses on the study and construction of algorithms that can learn from and make predictions based on data. These algorithms operate by following programmed instructions while also being capable of making predictions or decisions based on the data they process. They build a model from sample inputs, which allows them to perform tasks where traditional programming methods are insufficient.

Some common applications of machine learning include:

- **Spam filtering:** Identifying and filtering out unwanted emails.
- **Detection of network intruders:** Recognizing unauthorized access attempts to a network.
- **Optical character recognition (OCR):** Converting different types of documents, such as scanned paper documents or PDFs, into editable and searchable data.
- **Search engines:** Improving the relevance of search results based on user queries.
- **Computer vision:** Enabling computers to interpret and understand visual information from the world.

Sources:

Title: Machine learning **Source:** Wikipedia

Citations:

ID: 564928 **Page:** 1

Cited Quotes:

Machine learning gives computers the ability to learn without being explicitly programmed (Arthur Samuel, 1959). It is a subfield of computer science. The idea came from work in artificial intelligence. Machine learning explores the study and construction of algorithms which can learn and make predictions on data. Such algorithms follow programmed instructions, but can also make predictions or decisions based on data. They build a model from sample inputs. Examples include spam filtering, detection of network intruders or malicious insiders working towards a data breach, optical character recognition (OCR), search engines and computer vision.

Cited Context:

Machine learning gives computers the ability to learn without being explicitly programmed (Arthur Samuel, 1959). **It is a subfield of computer science. The idea came from work in artificial intelligence. Machine learning explores the study and construction of algorithms which can learn and make predictions on data. Such algorithms follow programmed instructions, but can also make predictions or decisions based on data. They build a model from sample inputs.** Machine learning is done where designing and programming explicit algorithms cannot be done. **Examples include spam filtering, detection of network intruders or malicious insiders working towards a data breach, optical character recognition (OCR), search engines and computer vision.**

Title: Artificial intelligence **Source:** Wikipedia

Citations:

ID: 6360 **Page:** 1

Cited Quotes:

Artificial intelligence (AI) is the ability of a computer program or a machine to think and learn. It is also a field of study which tries to make computers 'smart'.

Cited Context:

Artificial intelligence (AI) is the ability of a computer program or a machine to think and learn. It is also a field of study which tries to make computers 'smart'. They work on their own without being encoded with commands. John McCarthy came up with the name 'Artificial intelligence'.

Thank You

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