Analytics Vidhya

Hands-On: Building a RAG System with Sources

Instructor

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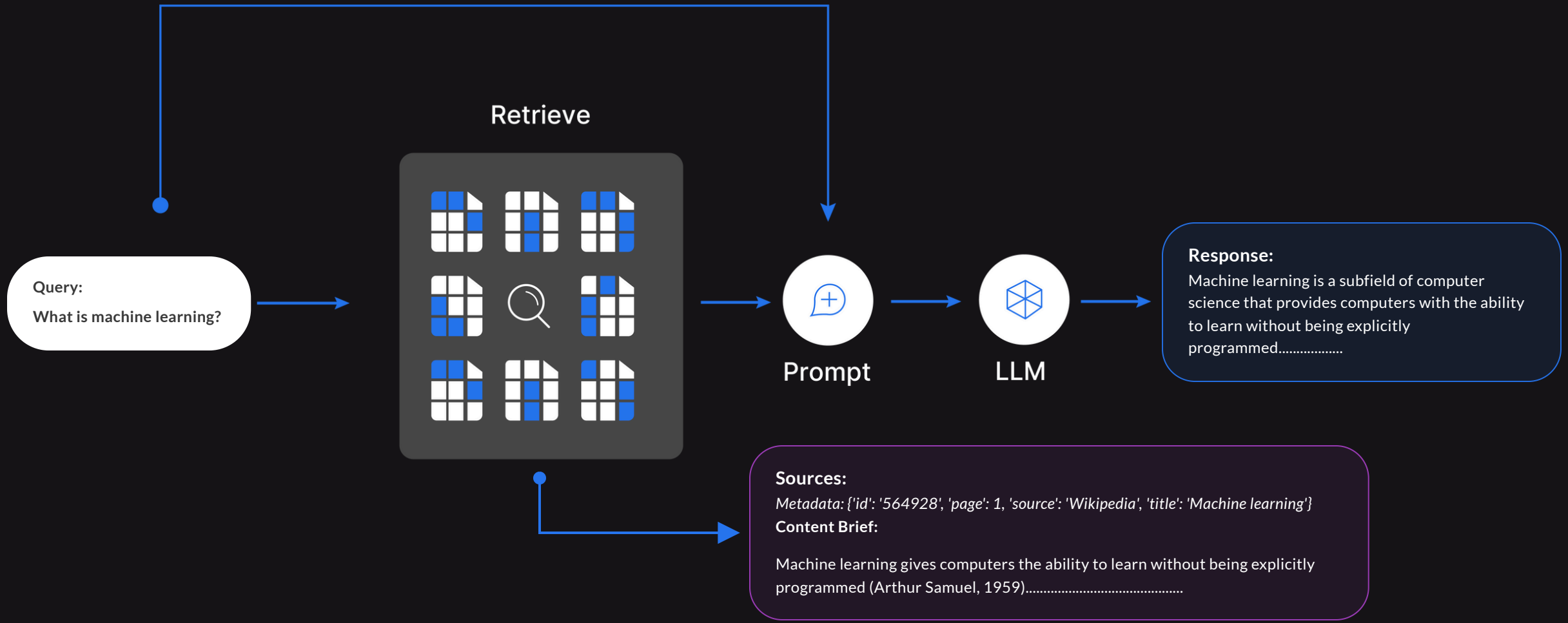
RAG System with Sources Workflow



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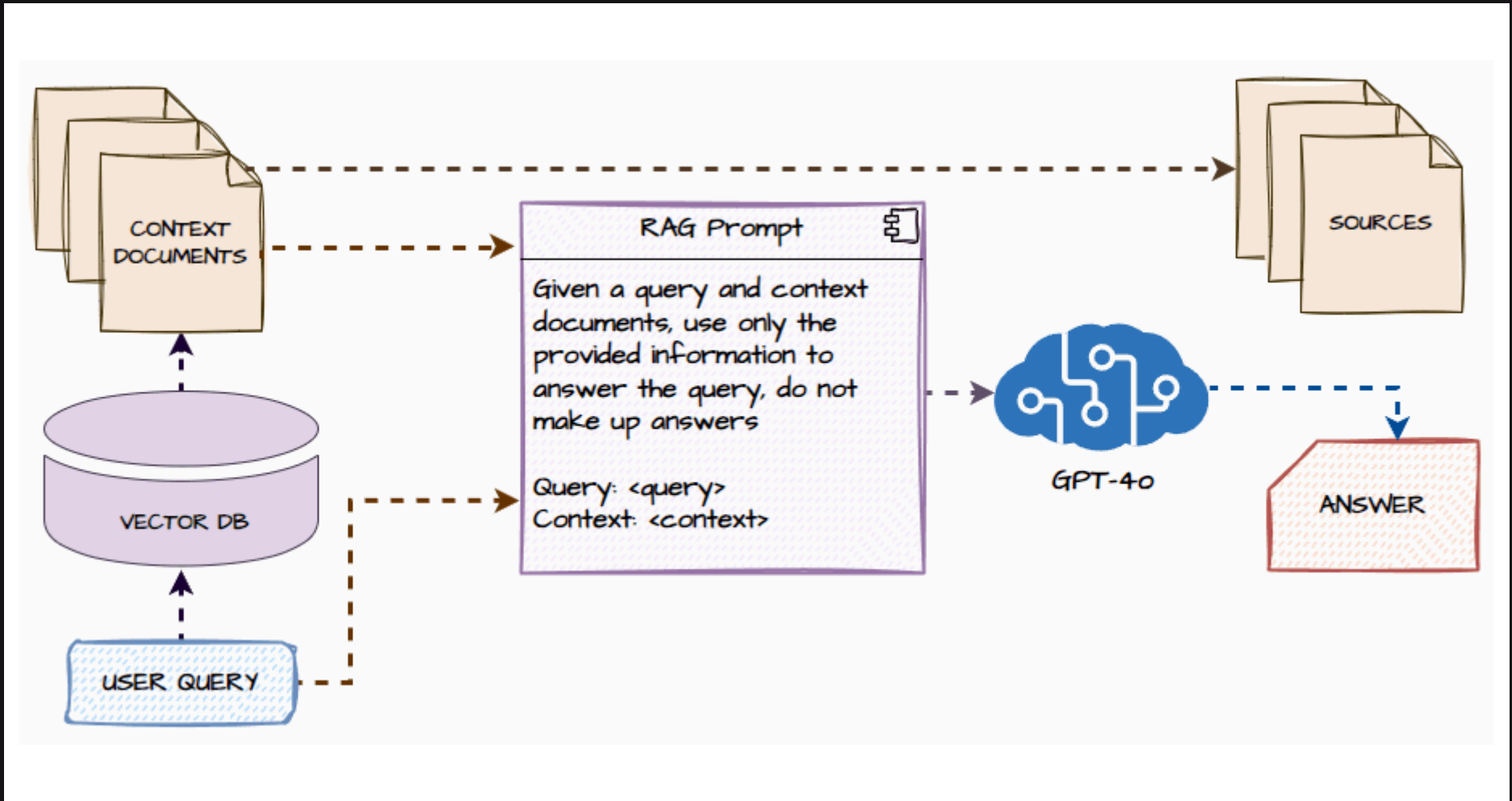
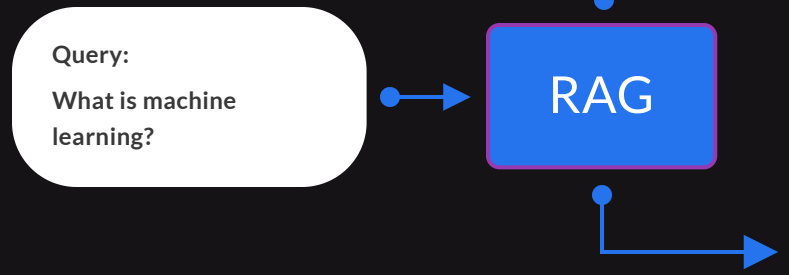
RAG System with Sources Workflow



RAG System with Sources Example



Response:

Machine learning is a subfield of computer science that provides computers with the ability to learn without being explicitly programmed. The concept originated from work in artificial intelligence and involves the study and construction of algorithms that can learn from and make predictions based on data. These algorithms follow programmed instructions but can also make predictions or decisions based on the data they process.

In machine learning, a model is built from sample inputs, and it is particularly useful in scenarios where designing and programming explicit algorithms is not feasible. Common applications of machine learning include spam filtering, detection of network intruders, optical character recognition (OCR), search engines, and computer vision.

Sources:

Metadata: {'id': '564928', 'page': 1, 'source': 'Wikipedia', 'title': 'Machine learning'}
Content Brief:
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.

Metadata: {'id': '359370', 'page': 1, 'source': 'Wikipedia', 'title': 'Supervised learning'}
Content Brief:
In machine learning, supervised learning is the task of inferring a function from labelled training data. The results of the training are known beforehand, the system simply learns how to get to these results correctly. Usually, such systems work with vectors. They get the training data and the result of the training as two vectors and produce a "classifier". Usually, the system uses inductive reasoning to generalize the training data.

Metadata: {'id': '665323', 'page': 1, 'source': 'Wikipedia', 'title': 'Deep learning'}
Content Brief:
Deep learning (also called deep structured learning or hierarchical learning) is a kind of machine learning, which is mostly used with certain kinds of neural networks. As with other kinds of machine-learning, learning sessions can be unsupervised, semi-supervised, or supervised. In many cases, structures are organised so that there is at least one intermediate layer (or hidden layer), between the input layer and the output layer. Certain tasks, such as as

Thank You

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