

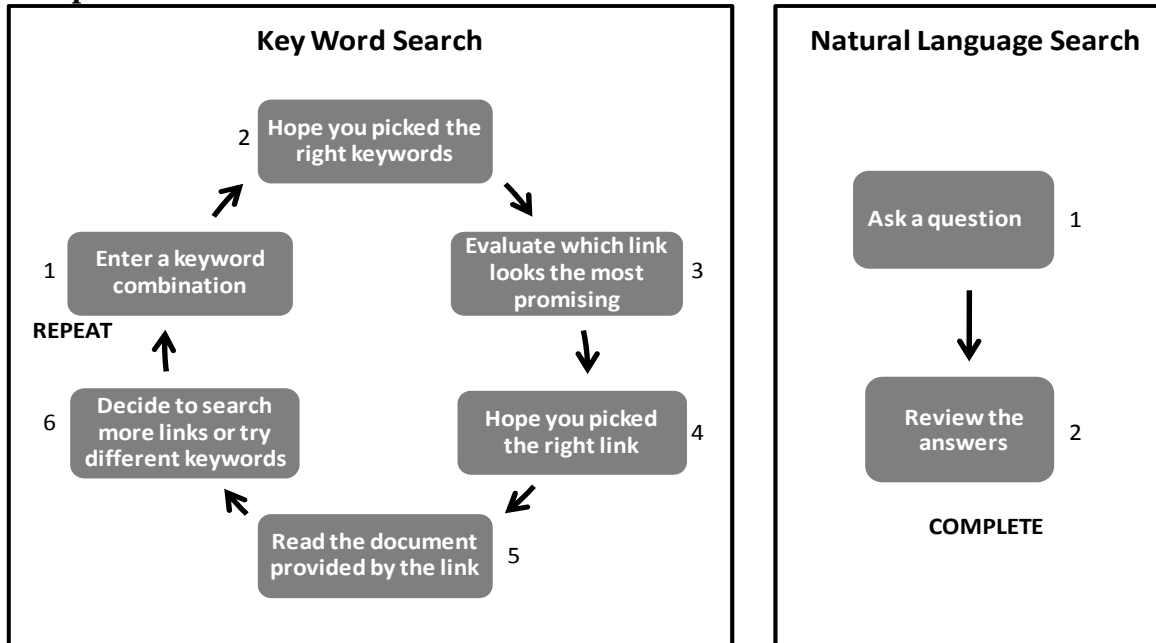
Primer on Natural Language Processing & the Semantic Web

What is Natural Language Processing and Question Answering Search?

Natural Language Processing (NLP) is the technology that evaluates the relationships of words such as actions, entities, or events, comprised within unstructured text, meaning sentences within paragraphs found in a variety of text based documents. Question Answering Natural Language Processing Search is the Natural Language Processing technology that specifically solves the problem of finding answers to a question which can be asked by simply entering it into a search interface using *natural human language*, for example, “Who is Barack Obama?”

Unlike keyword search in Google or Yahoo for example, Natural Language Processing Question Answering Search specifically allows users to ask questions in their natural language and then retrieves the most relevant answers within seconds. The standard search process requires the execution of multiple keyword combinations that then force the searcher to click on links only too frequently to find no answer and then they process of searching and liking continues until the user finds something or gives up. With Natural Language Processing Search there is no extra work and no need to search multiple links, resulting in immense time savings. Entering a question is simple for the user even though the technology behind the scenes is highly complex.

Comparison of Search



Why Natural Language Processing is a Critically Needed Technology

Anyone who has used a search engine to perform market, consulting, or financial research, can tell you the pain of spending hours looking for the answer to a seemingly simple question. Add up all the questions a researcher must ask and the hours really rack up.

Just how big is the search problem? According to International Data Group the average knowledge worker makes \$60,000 per year out of which \$14,000 is spent on search. Knowledge workers spend 24% of their time on search. Here is a quote from [Network World](#), "A company that employs 1,000 information workers can expect more than \$5 million in annual salary costs to go down the drain because of the time wasted looking for information and not finding it, IDC research found last year." Furthermore an [Accenture](#) study found that 50% of information retrieved in search by middle managers is useless.

In the document heavy financial services sector researchers are frequently forced to give up looking for answers, or cannot check the accuracy of answers with multiple sources because it would be time prohibitive. Senior risk management is comprised of a firm's most senior executives whose job is to evaluate if you are doing your job correctly to mitigate risk at the most upper levels of the firm. Now imagine you are on the phone with your firm's senior risk managers (your boss's boss's boss) and you are asked a question that you don't know the answer to? Imagine if you could type a short question into a search box and come up with an answer in time to provide an intelligent and correct response to the question? That is the power of natural language processing, you type in a question in "natural language" and be provided with an instant result containing the answer that saves the day.

How Does Natural Language Processing Work

Natural Language Processing builds off of a statistical relationship tree that shows the difference between "My friend Blair the singer" and "[Author Blair Singer](#)." In Natural Language Processing Search case one, "My friend Blair the singer" here "Blair" and "singer" are one node or branch away in the statistical representation. In case two "Blair Singer" here "Blair" and "Singer" are directly linked in the statistical representation. With the new technology built around statistical representations, Natural Language Processing Search technology **can now reach precision of up to 95%** given a full index. Precision is the measurement of how many top search results are relevant to the question.

Have you ever searched by entering two key words into a search box? Of course you have. You are trying to find information on two *related* variables. Someone might ask, "[How many hedge funds are there?](#)" Here the user is asking how many investment firms "**exist**" that are classified as a "**hedge fund**." Try any search engine and not one of the dozens of search engines, except [MyRoar](#), can provide an answer without requiring further research.

With this question "How many hedge funds are there?" today's search engines provide no answer whatsoever, even if you read through the pages of resulting links. Here in lies the problem, if you ask "How many hedge funds are there" you are likely to find an article about Hedge Fund *performance*, Hedge Funds in the *news*, but not one answer will give you the actual *number* of Hedge Funds. Regular search engines provides no technology that understands the difference between "Hedge" the *investment fund* and "Hedge" the *bushes* and cannot relate the context to understand you mean "Number" as in *number of funds* versus "Number" the *number of phone calls from telemarketers*.

How Natural Language Processing is Different than Semantic Search

Frequently associated with Natural Language Processing Search is Semantic Search, a related but actually very different technology. Semantic Search is designed to uncover meaning and can provide researchers with information extracted from unstructured text about sentiment, recording instances of “positive” and “negative” words and the frequency with which such sentiment surrounds a specific entity or event. For example, in semantic search you can evaluate how many times Microsoft had positive mentions in a span of articles. [MyRoar](#) has developed a Natural Language Processing Question Answering system that differs immensely from semantic search and other similar applications, because rather than looking for sentiment, we look for specific answers to questions that range from simple to very technical in nature.

Why is Now the Time for Natural Language Processing

For almost 20 years the evolution of this technology has been expected to progress to point where Natural Language Processing Search can filter out a majority of irrelevant results. In the last two years we have seen major advancements that means some of the behind the scenes Natural Language Processing technology is scalable and commercially viable for the first time.

MyRoar is the Ultimate Filtering Solution Using Natural Language Processing

Natural Language Processing is a hot technology in today’s world where we have an overload of information and the inability to adequately filter it. Because Natural Language Processing provides this filter it is the real answer to the problem, not semantic search, and not because semantic search is bad, but because semantic search solves a different type of problem which is sentiment. The two are often confused. With natural language processing you can answer any question as fast as you can type it. You will no longer have to scour several pages of search results, clicking through links, just to find it is not the right link. This is why MyRoar, Inc. provides something that people and businesses need, want, and must have with 95% precision and accuracy which is “astonishing” according to an industry analyst. We call it MyRoar because we provide the power to make you *ROAR*.

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