



# NLP Powered Search Query Optimization Solution

Making Search Quicker, Seamless and Efficient



# NLP POWERED SEARCH QUERY OPTIMIZATION-SOLUTION

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Search has become an integral component of the digitized world today. Application search engines act as filters for the wealth of information available on the website, allowing users to quickly and easily find information of genuine interest or value without the need to wade through irrelevant products. However, with users' diverse language/culture backgrounds, the ability to use computers, and the varied level of proficiency in the English language, it has become difficult for organizations to deliver results that match user expectations.

This leads to unsatisfied users as they cannot find the information of their interest. Therefore, organizations need to enhance their application search capabilities by make them responsive to the expectations of their customers & prospects.

NEC understands these challenges and has built a search query optimization solution that supplements the capabilities of application search engines through NLP (Natural Language Processing). NLP is a field of Artificial Intelligence(AI) that aims to close the gap between human speaking and writing and how systems comprehend this information. This NLP solution is deployed on top of existing search systems of websites and facilitates existing search functionality and not replace it.

# HOW DOES NLP WORK?

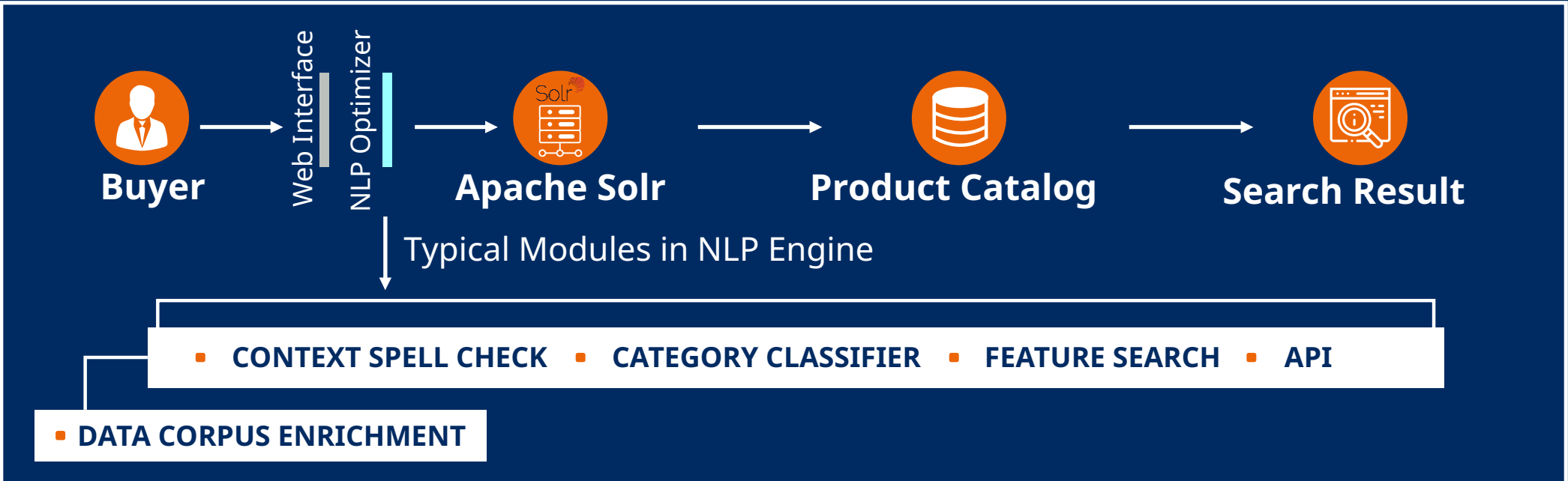
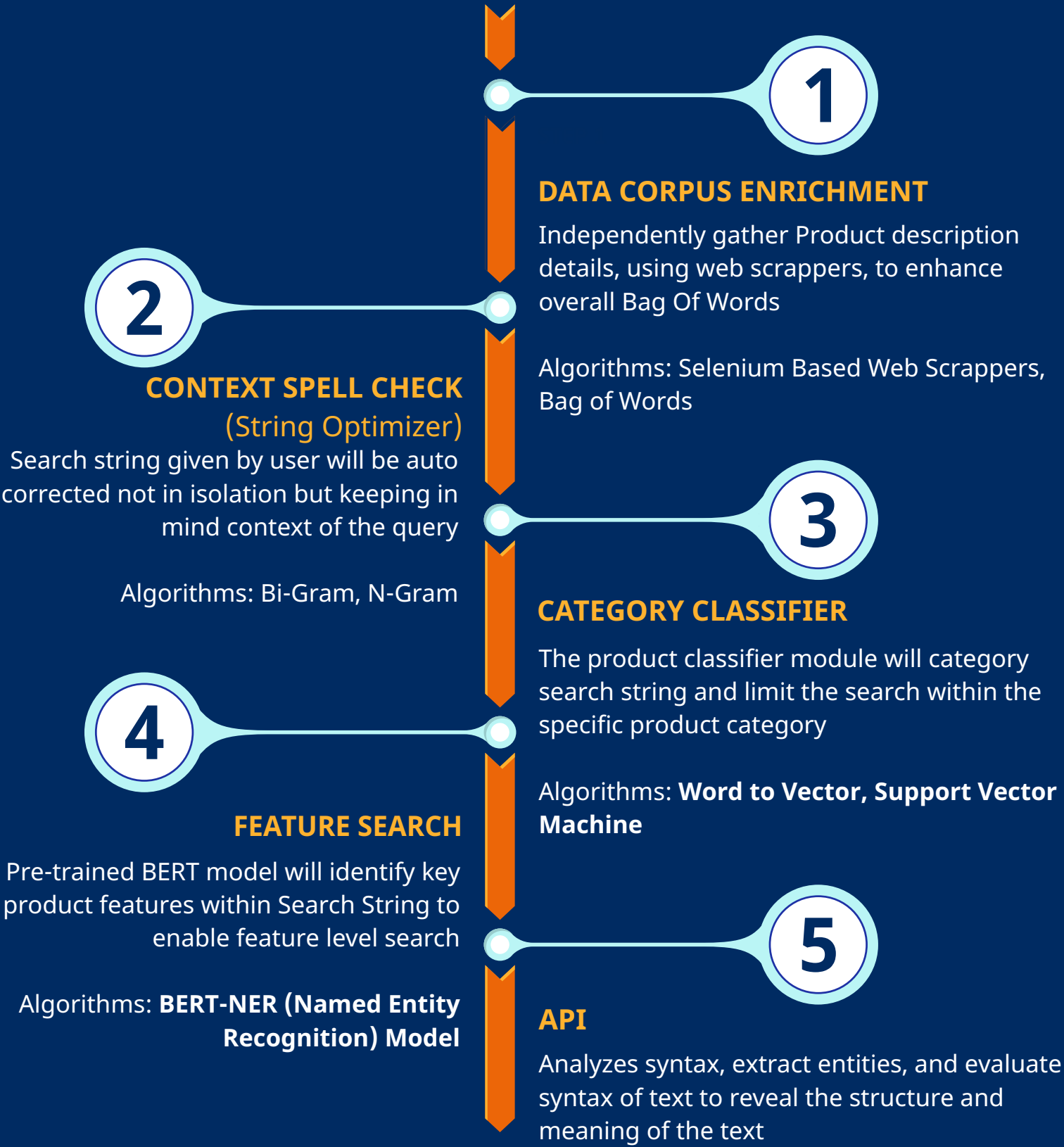
Natural language refers to how we, humans, communicate with each other, namely, speech and text. NLP enables computing systems to decipher and understand this language using linguistic AI capabilities. Many NLP techniques enable simplifying customer's queries, understanding customer sentiments, & reducing data processing time.



NLP adds a lot of benefits to the entire application search engine ecosystem. With the help of NLP, computers can read and interpret text, measure sentiment, and determine which parts are important from a large volume of textual data. This further helps in displaying appropriate product and service recommendations from the internal database, thereby improving customer dwell time and purchases.

# SOLUTION FLOW

NLP has many use cases such as language translation & chatbots that interacts with users rather than just serving result pages with related information like a search engine would. Here, when a buyer interacts with the application through the interface, the query is run through the NLP optimizer, which ascertains the query submitted by the user by understanding words and establishing context. This is done through 4 modules



# BUSINESS OUTCOMES

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## ENHANCED CUSTOMER EXPERIENCE & TRUST

Deliver lightning-fast, highly relevant results for customer's queries.



## HIGH PRODUCT CONSIDERATION

Customers to have better choice in terms of product selection based on more relevant products displayed



## INCREASED SALES CONVERSION

Improved sales on the platforms since the customer will be able to find only relevant products.



## HASSLE-FREE EXPERIENCE

Reap the benefits of the search engine without worrying about the underlying maintenance, hardware, and expertise required to consistently use them.

# WHY NEC

We at NEC possess deep expertise in the design and implementation of NLP based search query optimization solution that leverages the most innovative techniques including predictive analytics, Artificial Intelligence (AI), data modelling, and Machine Learning (ML). We work by analyzing your current application search capabilities and technologies to identify the bottlenecks that need to be addressed to improve search results. Our mission is to enhance search capabilities to improve customer engagement and increase profits.



## Capabilities on Technology Stack

Core business experience combined with domain and technical expertise with evolving tools and technologies.

### Skilled Workforce

In-house business & domain experts

- Data Stewards
- Data Scientist
- Big Data Engineers
- Architects
- Consultants & Data Analysts

### Domain Expertise

Solving Complex Data Challenges

Myriad of Successful Analytics Projects

### Dedicated Analytics Research Labs

Work for Solutions for Societies

### Robust Partner Ecosystem



Strong Partnerships & Alliances Across Data Platforms and Analytics Solutions

## Technology Partners



Contact us for more information:

[marketing@india.nec.com](mailto:marketing@india.nec.com)

[in.nec.com](http://in.nec.com)

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