

# Arcarithm’s Natural Language Processing Algorithms offer a powerful, automated solution for accessing data.



**OVERVIEW**

Analyzing big data is a big challenge for enterprises. Most people are not skilled in SQL or Boolean search, and there is simply too much information and not enough resources to sort and manage it. The problem is further compounded by massive amounts of unstructured data collected by many organizations. Alchemy is an advanced data management and mining solution that applies sophisticated AI-based Natural Language Processing algorithms to translate everyday language into actionable database queries providing efficient access to critical data.

**TECHNICAL**

Alchemy provides automated analysis of digitized textual and speech data for context and meaning with support for spoken or typed data requests. Predictive analytics and metrics allow process tracking and trend analysis. Capabilities include automatic identification of relevant databases with flexible visualization tools for novice and expert data users. Alchemy’s fully modular deployment strategy simplifies upgrades and enhancements.

**Alchemy consists of three components.**

**Interface Plugins**

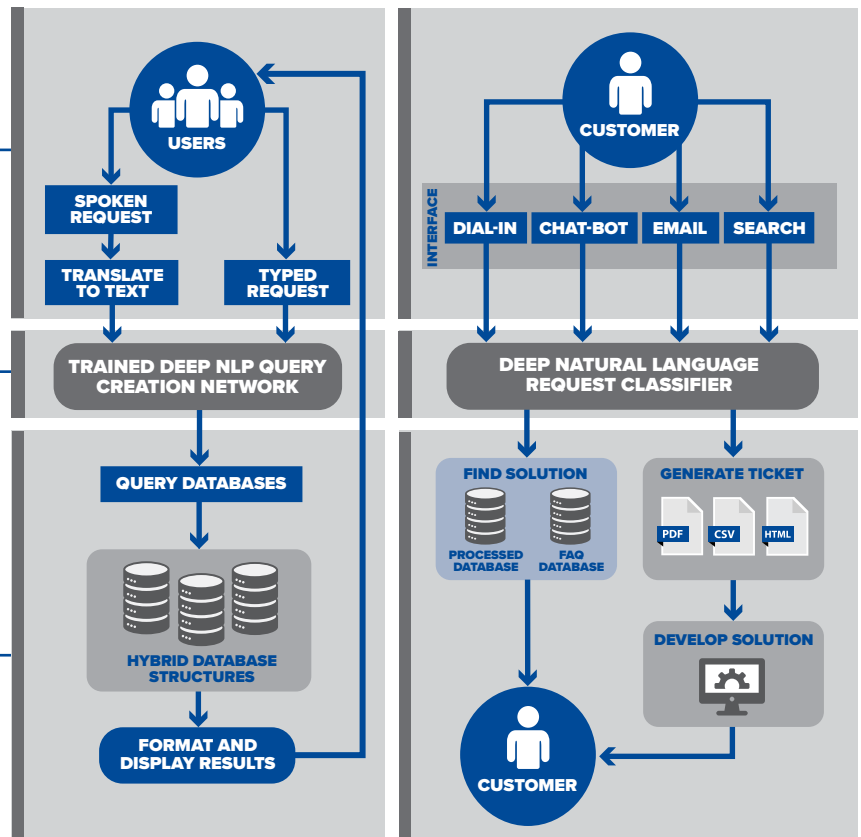
Decompose and process natural language data users at any level.

**Deep Natural Language Network**

Translates the text, analyzes the context and finds the data you need when you need it.

**Data Delivery and Actionable Task Generation**

Obtains the results from existing databases and displays them to the user in seconds allowing users to get to critical data faster.



## A Big Data Management Solution

- *Reduces time and complexity - simple data requests process and execute in seconds allowing analysts and data users to find and use the data they need quickly.*
- *Visualization tools reduce user burden - user experience centered design makes the interface intuitive which reduces training needs.*
- *Flexible to expedite analysis and actionable task generation - data exploration and extraction through intelligent automation reduces the burden on the user allowing them to spend more time working with data and less time finding it.*
- *Lightweight API provides easy installation - API for integration with enterprise alert and visualization services reduces integration cost and risk.*
- *Modular plugins and component interfaces follow industry best practices to save deployment cost and time, lowering the overall cost of development and fielding.*

## SECURITY / OPERATION

Alchemy security features include role-based login, application authentication and message encryption. Further, the Alchemy Application Programmer's Interface (API) operates inside a docker container isolating the API from the rest of the system as an extra layer of security while ensuring the software does not conflict with other required system dependencies.

Arcarithm provides required training on how to interface the Alchemy network with the database and how to understand the output, with onsite training available. A training manual is provided with each Alchemy license, and Arcarithm provides call center support as well.

## SYSTEM REQUIREMENTS

CPU	Intel Core i5 or AMD Ryzen 5 (or better) with at least 4 cores
Memory (RAM)	64-bit System: 16GB minimum 32-bit System: 8GB minimum
Operating Systems	Ubuntu 18.04 or higher Windows 10.1 or higher
Graphics Card	NVIDIA GeForce GTX 10 Series or newer with a minimum of 2GB RAM
Minimum Screen Resolution	1280 x 720 pixels
Storage	64GB minimum free space required

*Alchemy integrates with existing Big Data infrastructures via an extensible API that includes abstracted interfaces for interaction with any database type. Alchemy is delivered via direct digital download or a set of DVDs.*

## PRODUCT DETAILS

Manufacturer	Arcarithm
Product Name	Alchemy™
Version	21.1
Manufacturer Part Number	A2021B
Product Type	Single License
Platform	Ubuntu / Windows 10
Shipping Method	Digital delivery (or DVDs)

## ABOUT ARCARITHM

Deep Learning and Artificial Intelligence (AI) are buzz words commonly used throughout defense and commercial markets, often without true understanding of those terms. At Arcarithm, we are defining those terms and more, with proven solutions on par with multinational tech leaders. From the big picture distinction between strong and weak (or narrow) AI, to the fine-grained focus of deep versus shallow neural networks, Arcarithm delivers a depth of understanding and operational maturity beyond the capability of most companies. Our experience with every aspect of algorithm design, training, deployment and evaluation allows Arcarithm to produce quality products quickly and effectively, with the highest levels of reliability and accessibility.



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