

Intent and Context Driven by Natural Language



SmartBotHub

Natural Language Processing (NLP)

The **SmartBotHub NLP Engine** was built to handle the unique implementation challenges faced by businesses when exposing applications and services to human language as an input interface to facilitate interactions. The challenges include supporting the user's native language, context and intent; the brokering of the application programming interface or API call for the transaction request; and the ongoing improvement of natural language processing based on past interactions.

SmartBotHub's platform is designed to efficiently process user interaction intents with business services using minimal "talk". The goal is always to quickly understand the user's intent and complete the transaction in as few steps as needed. The SmartBotHub NLP Engine and subcomponents adhere to the theme of "quick" processing with key functional components that include:

- **NLP Engine**

The NLP engine handles incoming conversations from the user channels and interprets human language context and intent. This process culminates in a "request" that is handed to the request broker for parsing to the required API in a form that can be understood by the business application.

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INDUSTRY

All

REGION

All

BUSINESS IMPACT

Efficiently process user interaction intents with business services using minimal "talk" and quickly complete the transaction in as few steps as needed.



SmartBotHub

Setup a demo today at SmartBotHub.com

Conversational Engagement
at Scale

- **Context Manager**

The context manager provides the libraries of system, user and industry intents and context. System intents are items such as date and time and are common across any conversational interaction. User intents are unique to a particular business and could include attributes such as product names and service policies. Industry intents are of course associated with unique intents of the sector that the business operates in.

- **Training Loop**

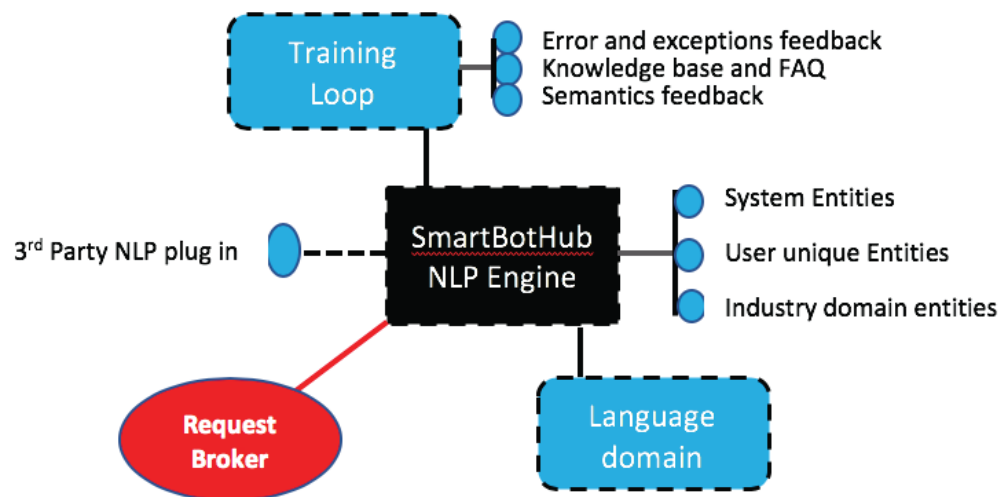
Training loop provides the automated and manual intakes for errors, semantics and knowledge components, and frequently asked questions or FAQs.

- **Request Broker**

A conversational intent is translated by the request broker into an actionable transaction in the computer language consumable through the API of the target business system.

- **Language Domain**

One or multiple languages can be initially set up into the language domain libraries and then be available for use by the NLP Engine and components. Multiple languages can be available to any given chatbot use case.



Technology Stack and Deployment

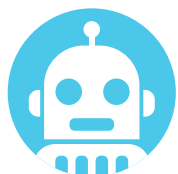
The SmartBotHub NLP Engine utilizes robust libraries including the following:

- **Tensorflow** – an open-source software library by Google for dataflow programming across a range of tasks. It is a symbolic math library and is also used for machine learning applications such as neural networks. The SmartBotHub NLP Engine uses it for deep learning.
- **SpaCy** – an open-source software library for advanced natural language processing published under MIT license and written in Python and Cython programming languages.
- **Scikit-Learn** – a free software machine learning library supported by Google for the Python programming language. It features various classifications, regressions and clustering algorithms.

Experience You Can Put to Work

Flexible and Adaptable to Changing Underlying Systems

SmartBotHub is part of SmarTek21, an enterprise technology company with over a decade of experience delivering professional services to solve complex IT challenges. Our team and breadth of experience empowers us to quickly integrate with any existing enterprise IT systems and unlock the data they hold. This is an important skill to ensure BOTs become an extension of your business and deliver the intelligence needed for meaningful interactions. Our team will also work with you as you evolve your IT infrastructure and bring online new systems and data sources including other bots, natural language processing (NLP) and artificial intelligence (AI) applications as well as common enterprise applications ranging from customer relations management (CRM) and sales force automation (SFA) to enterprise resource platform (ERP), issue tracking system (ITS) and supply chain management (SCM).



70+ BOTs Ready to Get You Started

SmartBotHub has already tackled countless use cases in the wild across the healthcare, insurance, financial services, automotive, telecommunications, education, and retail industries. We make these BOTs available to help our customers get started quickly and realize the power of a conversational engagement platform.

Get Started Today

Call us today for a demo and to discuss how SmartBotHub can accelerate your enterprise's customer engagement strategy.



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About SmartBotHub

SmartBotHub enables enterprises to create compelling (chat) message (bot) automated transactions for customers and employees enabling businesses to move faster and provide "always on" services. SmartBotHub is an omnichannel, highly agile platform that connects enterprise applications and services allowing companies to create compelling and easy-to-use chatbot experiences for their customers. The management team has over 11 years of sophisticated UI/UX design and deployment experience for millions of Fortune 500 end users.

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