AI-Enabled Cognitive Virtual Assistant

Enterprises have grown at an exponential scale. Multiple business units operate within an enterprise. It is these business units that an end user belongs to. An abundance of resources are deployed by enterprises to transform end-user (employee and customer) experience, while improving productivity and fostering innovation.

In an effort to further bolster end-user experience and uphold innovation, enterprises offer multiple channels of communication like social media, websites, call support, forums, etc. However the perpetual challenge is to ensure consistent, personalized, and immediate digital experience across all channels.

Focusing on these enterprise business problems, HCL designed it's cognitive virtual assistant **DRYiCE Lucy** (Lucy). It mimics human interactions, learns, and adapts to user needs through smart conversations by leveraging enterprise-grade Natural Language Processing (NLP) and Machine Learning (ML). Users can leverage Lucy to procure relevant information spread across a multitude of enterprise systems. Lucy helps organizations move up the maturity curve and enhance user experience for both employees and customers. By deploying advanced NLP, Lucy reduces human error and increases productivity. It comes with out-of-box use case for various scenarios and can be easily extended to cover the "Cognitive Chatbot" needs of modern enterprises.

CHALLENGES ADDRESSED BY DRYiCE LUCY

Limited availability of support resources causes high wait time
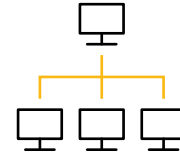
Multiple systems and applications to get the simplest routine work done drains time and efficiency

Language inconsistency in a global business scenario leaves users dissatisfied

Routing through a complicated and information-heavy system, to fetch required knowledge wastes time and effort

Absence or high cost of 24X7 help/support system

Inconsistent responses to same or similar end user queries based on support executives' understanding

KEY FEATURES

Enterprise Grade Security
Data region flexibility with end point-based security and third-party integrations. The current version of Lucy is Security Assertion Markup Language (SAML) and Single Sign-On (SSO) enabled

Flexible Billing
Custom fit billing model with numerous billing templates and usage categories

Context Switching
Multi-level context switching that allows users to get back to incomplete or digressed conversations

Third party Integrations
Out of The Box (OTB) third party integrations with IT Service Management (ITSM)/ Enterprise Resource Planning (ERP)/ Robotic Process Automation (RPA) and Customer Relationship Management (CRM) providers for quick and robust deployment

On Demand Scalability
Scalable platform for enterprise business needs

Multiple OTB Channels
Various OTB channels available to easily configure

Dynamic Customer Provisioning
Software–As –A-Service (SAAS) availability of Lucy for a provider to create multiple Lucy instances for different customers

Configuration Management
High configurability with low maintenance through rich Graphic User Interface (GUI) role-based consoles

KEY MODULES

Configuration Module

Administrators can configure Lucy for various aspects. It has various sub-modules such as Standard Operating Procedure (SOP) Management, UI Management etc. to name a few.

Cognitive Module

Lucy has the ability to understand and interpret the context of conversations happening in natural language. The product is NLP engine agnostic and can work with all industry leading NLP engines.

Channel Integrator

Lucy can be integrated with any voice / text based channel of communication like voice assistants, social media channels (FB Messenger, Skype, MS Teams), and email to receive intuitive human like responses.
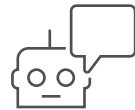
NLP Engine

NLP engine empowers Lucy to comprehend all conversations happening in natural language.

Rule Engine

The Rule Engine enables Lucy to define business rules and enabling integration based on context of conversations as identified by the NLP engine.
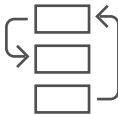
CASE STUDY

CUSTOMER BACKGROUND

- Finnish industrial machinery organization focusing on providing technology and services.

- Revenue – USD 3.2 Billion (2018)

- Employees – 14,000+

PROBLEM STATEMENT

- Complex infrastructure and application landscape with multiple data repositories.

- Sluggish user experience with impact on user productivity leading to decrease in business efficiency.

SOLUTION HIGHLIGHTS

- HCL implemented Lucy as an assistant available on customer portal, with the ability to access various web portals to procure relevant information. This eliminates the need for manual routing between and within various repositories.

- Lucy leveraged its NLP capabilities to converse with the end user and retrieve information.

- It ingested and analyzed 83,000 documents spread across 2 different repositories for multiple business domains including HR, Finance, IT and Legal to understand, index and fetch the relevant information.

- In a scenario where Lucy could not find a relevant answer in any of the repositories, it fetched that information from external sources (web) and presented it to the user.

- Lucy can also transfer the conversation to a human expert when required or otherwise open a service desk ticket on user's behalf.

- As a next step Lucy will mature into taking actions on user's behalf driven by RPA integration

BUSINESS OUTCOMES

- Enhanced user experience
- Time efficient information retrieval
- 24 x 7 availability
- Transformation from Search based experience to a Conversation driven experience

DRYiCE is a division of HCL Technologies focused on building industry-leading software products for transforming and simplifying IT and business operations by leveraging AI and Cloud.

Our vision focuses on:
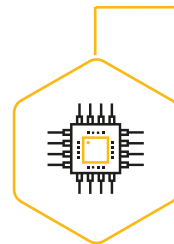
Enabling a service Oriented Enterprise

AI-led Service Assurance

Driving Enterprise-wide Digital Agility

Business Flow Intelligence

Want to know more?
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