Cognitive Assistant Application for Healthcare Providers

Healthcare

As the U.S. healthcare industry transitions from volume-to-value-based care, proactive patient engagement is emerging as a key business goal for providers. Digitally empowered consumers today seek on-demand access to personal health data for preventive care, as well as prompt responses to their queries and grievances. This makes it imperative for hospitals, clinics, physicians and other caregivers to reimagine their customer service function, and provision intuitive touch points for effective patient interaction.

Tata Consultancy Services' (TCS') Cognitive Assistant is an application based on machine learning, pattern recognition and natural language processing technologies, which helps providers proactively engage with patients. The solution makes automated–and relevant–recommendations to patients, helping them take timely and informed decisions regarding physicians, care plans, and appointments. By generating data-driven insights on individual patient conditions, this application also facilitates effective preventive care for robust wellness management.

Overview

Despite growing talk of proactive patient engagement across the care ecosystem, several core business processes and related IT systems at the providers' end continue to remain 'reactive'. The configuration principle underpinning these workflows and setups remains centered around episodic care, rather than preventive treatment. Consequently, providers struggle to effectively interact with patients, and provide adequate, actionable information on the latter's health conditions and diagnoses. The high wait times at call centers reflect this acute pain point for consumers across the board. Caregivers need to aggressively look at automating their business processes relating to appointment scheduling, remote patient monitoring and payment processing, among other workflows, for faster–and satisfactory–customer service.

TCS' Cognitive Assistant application, built around cognitive technologies, empowers providers to deliver personalized customer care–at scale. The self-learning virtual assistant enhances the efficacy of caregivers' patient engagement platforms through automated voice interactions. It uses pattern recognition and natural language processing algorithms, alongside analytics, to glean actionable insights from patients' historical data, and provide recommendations based on their current medical conditions. The application serves as the primary touch point for patient assistance for several activities, including booking physician appointments, finding the nearest provider, optimizing benefit plan selection, and tracking claims reimbursement. The application also triggers SMS, e-mail and mobile app notifications and reminders to patients, for effective remote care.

Benefits

By adopting TCS' Cognitive Assistant application, healthcare providers can reap the following benefits:
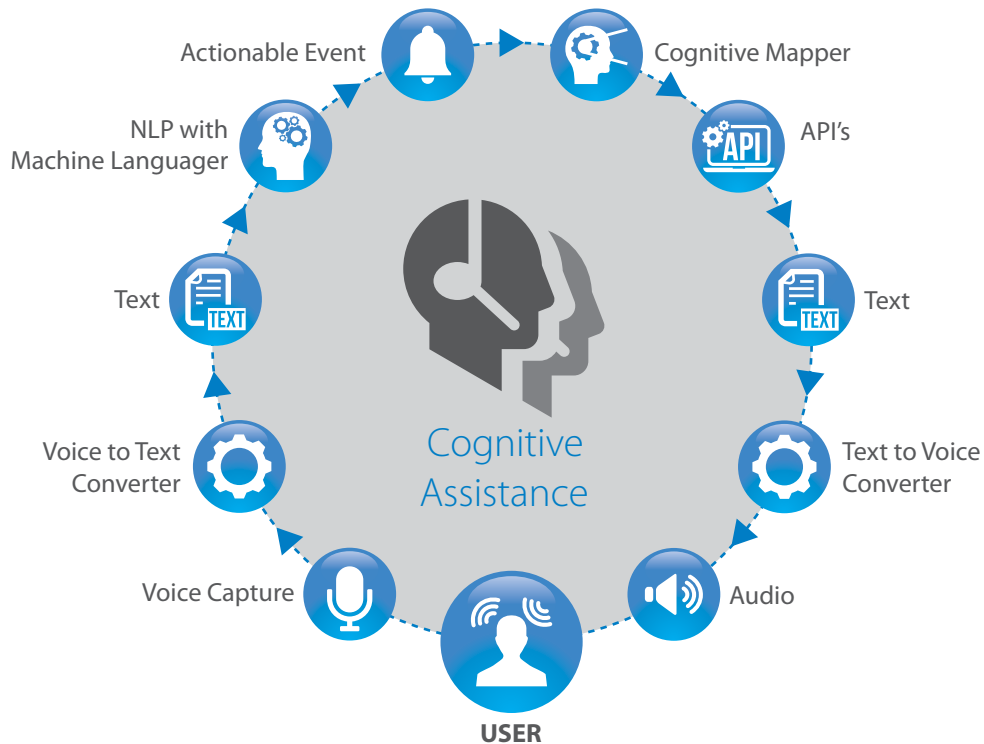
Proactive engagement: Improve care outcomes significantly by diligently measuring and tracking patients' health parameters, thus making the ever expanding volume of digitized health records actionable; drive increased awareness among patients regarding various conditions through the dissemination of targeted, customized educational content

Increased customer satisfaction: Deliver superior customer service and proactive care, based on accurate data, to help patients manage their conditions better; harness relevant data from diverse sources including the provider forum and social networks to help patients make quick and wise health-related decisions; minimize delays in responding to queries, thus winning patients' trust, and strengthening brand loyalty

An Overview of Cognitive Assistant Application

Actionable Event — Cognitive Mapper

NLP with Machine Languager — API's

Text — Text

Voice to Text Converter — Text to Voice Converter

Voice Capture — Audio

USER

Cognitive Assistance

The TCS Advantage

You can avail of the following unique advantages by partnering with TCS:

- **Analytics engine**: Our application is built around a data analytics engine that helps predict health parameter data based on patients' health patterns. They will then be notified in a timely manner to take appropriate action such as to visit a doctor or schedule a screening check-up.

- **Consumer-focused approach**: Our solution ensures continuous improvement in service quality. We have leveraged machine learning algorithms to capture data and modify the models accordingly.

- **Quickly customizable**: The application can be readily tailored with configurable branding and app theming, based on your business objectives and use-case scenarios.

- **Product/ platform-agnostic**: Our application ensures integration across multiple care providers, mobile apps and data elements.

- **Innovation Focus**: We are committed to investing in innovative technologies to provide superior solutions to our clients. We offer holistic connected health and wellness solutions by creating our own intellectual property (IP) and harnessing the digital technologies – mobility and pervasive computing, cloud computing, social media, Big Data and analytics, artificial Intelligence and robotics.

Higher operational efficiency: Reduce the volume of customer center queries by automating the underlying workflow; use the self-learning cognitive assistant, in conjunction with updated centralized databases, to address a majority of health related queries and events; reduce the costs involved in setting up and maintaining a complex physical infrastructure

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