

Building a cognitive application for a US-based healthcare related Startup

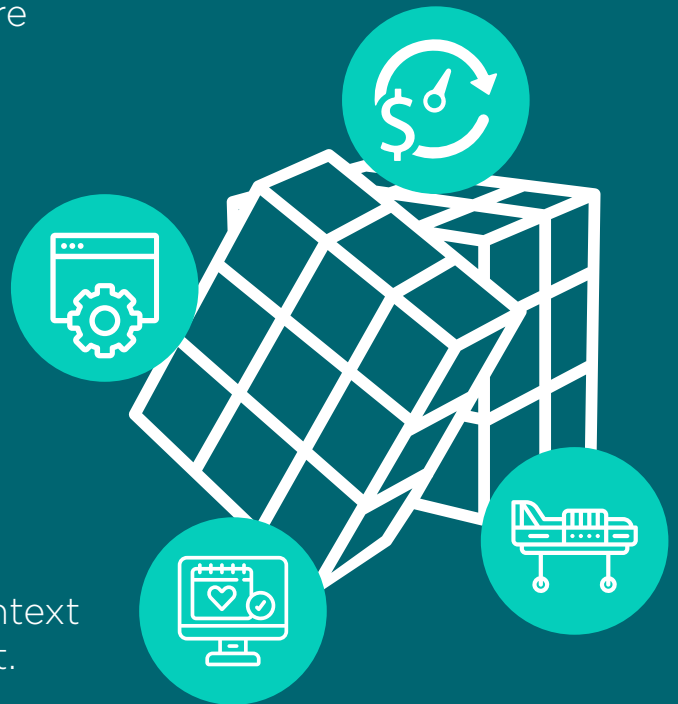


BACKGROUND

Feuji’s client, a healthcare startup in the US, was planning to build solutions around the healthcare ecosystem. One such product was a web-based cognitive solution for the elderly with chronic diseases.

CHALLENGES

- ▶ The client needed help with software product engineering to build the solution using platforms like IBM Watson, Raspberry Pi and speech recognition tools.
- ▶ Time and budget were both constraints to build the first version of the product. Building the product within the planned time was a critical client goal.
- ▶ The system needed to naturally converse with the patient in the context of their on-going medical treatment.
- ▶ The solution needed two interfaces:
 - A web-based interface for administrators to input patients’ treatment procedure such as doctor’s appointment details, lab test appointment details, day-to-day medication schedule etc.
 - Patient interface built on Raspberry Pi in order to interact with the patients and answer their queries in a natural way.



SOLUTION



Analyzed the requirements in detail and categorized the functionality into smaller independent modules. Some of the features included speech translation, recognition and natural language processing.



Used IBM Watson's ability to process the natural language text and developed a cloud-based application around IBM Watson that could take text as input and return the desired response as output. This involved training the application with a lot of domain-specific data.



Technology used: C#/.NET, Entity Framework, My Sql Server, JQuery, IBM Watson, Raspberry Pi, Google tools for text-to-speech and speech to text tools.



Built a solution on Raspberry Pi that could take patient's speech as input and send the request to the IBM Watson-based application that returned the desired output in the form of text. The response was then fed to the speech synthesizer that provided human voice capability.

OUTCOME



Precise on-time completion of the developed product.

The solution provided human-like interactions with the patients



HEADQUARTERS

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