Project Profile

AutoDoc

Location:
Nigeria

Project:
AutoDoc

Industry:
Privately held Clinic

Technologies / Platform:

- Artificial Intelligence
- Java

Business Benefits:

Customer / Consumer

- To have a system like a doctor
- To help or replace a doctor in diagnosing a patient based on his lab test reports

  To make the system intelligent enough which can grow and learn with every case given to it for diagnosis

Client

Nigeria based client Abeo Oni wanted a solution for his client who owns a Clinic and Test Laboratory. The solution should, on basis of test reports of a patient can take a decision whether the patient has possibility of ailment and should consult a doctor or go home.

Business Needs

- As a part of patient care process in a clinic, the objective of solution was to eliminate the need of a doctor to analyse the lab test report of a patient to determine the possibilities of complexities or ailments and guide him whether he should go for intense care treatment or go for general care and consult a doctor or simply go home.
- To capture all the possible attributes needed for accurate diagnosis and also ensuring that it keeps getting enhanced with every case so that the diagnosis keeps getting more accurate over the time

Rapidsoft's Role

- To make the process fast and reliable, Rapidsoft engaged an SME (Subject Matter Expert) along with a Business Analyst to have an in-depth discussion with the doctors and Lab assistants to create the initial knowledge base by collecting and storing all the necessary data needed for taking decision for patients
- This data was used to train the AI model by feeding in complete diagnostic logic.
- After the AI model is successfully trained it feeds on the data which is extracted from Lab tests done on a patient and the AI tells instantly what should happen with the patient based on his reports.

Solution Overview

To solution consisted of the following parts:

- **Knowledge Base**
  - The Knowledge base, which consisted of IF-ELSE rules, was made exhaustive enough, capturing all the possible combinations of attributes which made the system more reliable and accurate in taking a decision
- **Inference Engine**
  - An efficient and intelligent Inference Engine was developed which could use the rules of the Knowledge Base smartly and reach a conclusion, quickly and most accurately.
- Initially the system did not have exhaustive knowledge base and was not able to draw inference for many cases but the system was made intelligent enough to "learn" and train itself from every case diagnosed by it and kept adding to its database of Rules.