Voice Prescription

Ministry/ Organization name: Bajaj FinServ
Team Name : Spitfire
College Code : U-0804

Problem Statement : Voice Prescription
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Idea / Solution Prototype

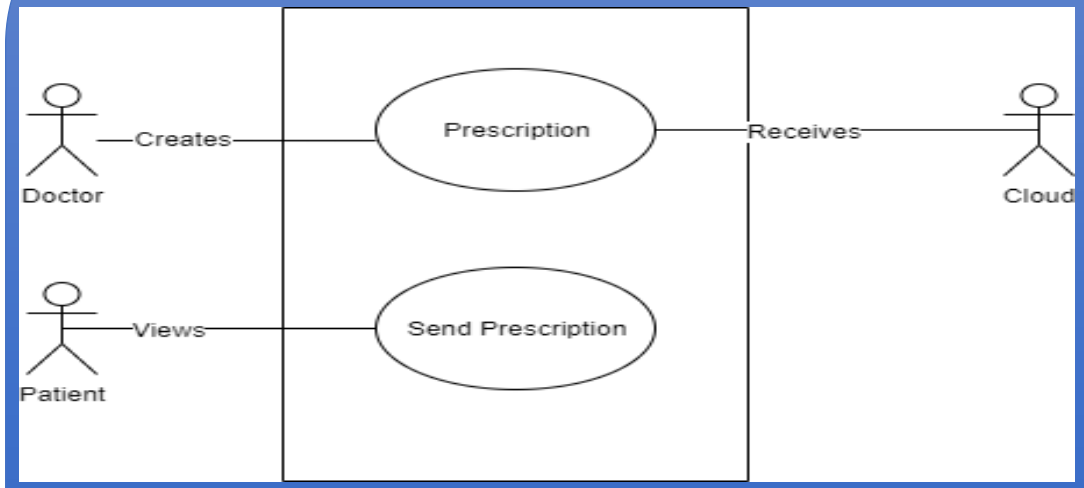
Voice Prescription:
(With AWS Analytics, Storage and Security for automatic data storage and analysis for any research use)

- Complete hands-free experience with hot-word detection.
- No mandatory internet connection. A.I. models made compact to run on local device for non-stop flow. The app syncs with Cloud when connection is available.
- Hassle free experience with automatic parsing of input text. Text fields are filled automatically once prescription is dictated.
- Fields can be editable by voice or manually.
- Multi-language (currently Hindi and English) support for ease of use.
- Encryption of data at every level. Compliant with HIPPA regulations.
- Delivery of prescription to patient through mail or SMS.
- AWS Cloud storage facility (Dynamo DB and S3).
- Analytics of medicine, symptoms, diagnosis etc.

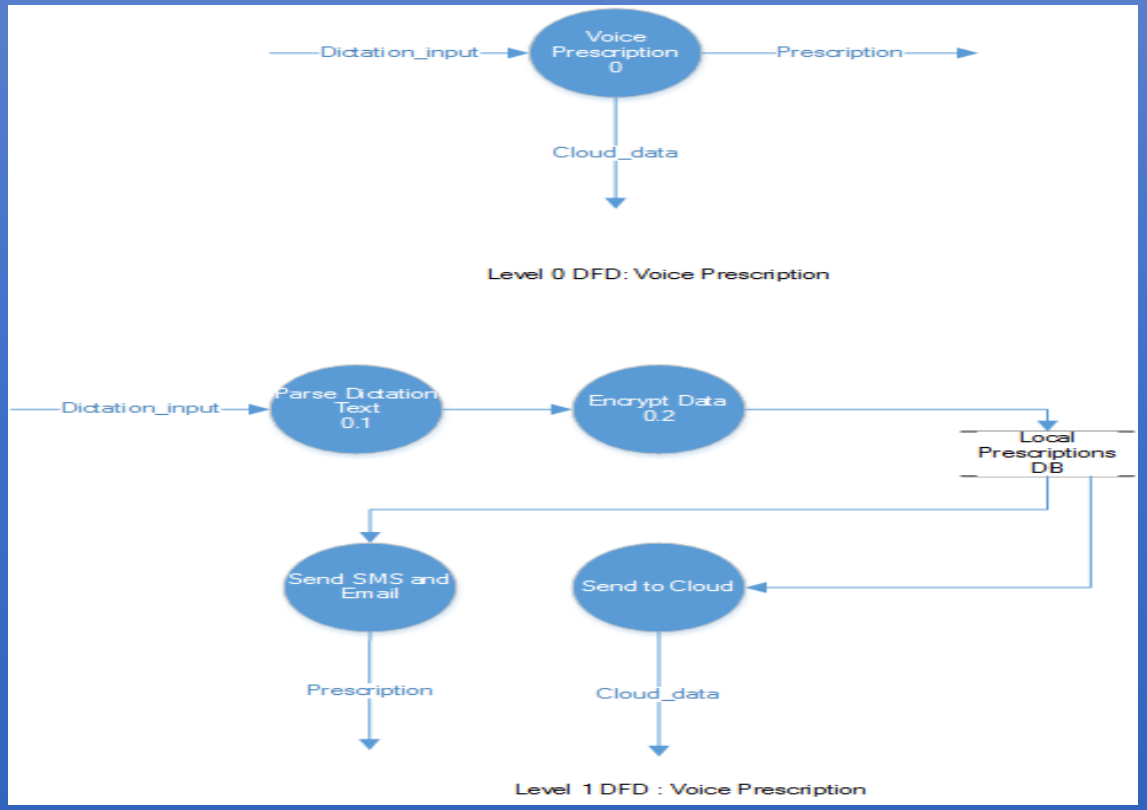
Technology Stack

- Android 5.0 and Above
- AWS Cloud
- Java
- Python
- Tensor Flow - Lite
- Natural Language Tool Kit
- AWS Code Pipeline, Code Build, Code Deploy and Code Star
- Git and Github

Use Cases



- The doctor dictates the prescription and send that prescription to the patient.
- The cloud receives the prescription from doctor and trigger an SNS service to send notification and email to the patient.



Dependencies

- ❑ TensorFlow-Lite
- ❑ Scikit learn, Keras
- ❑ Retrofit (REST client library)
- ❑ Timber
- ❑ Snowboy
- ❑ AWS Cloud
- ❑ Google Authentication
- ❑ Boto 3

Show Stoppers

- ❑ Lack of Voice Dataset
- ❑ Indian medical registry search site
- ❑ Lack of Users
- ❑ Unavailability of Medical Terms/ Names
- ❑ Prescriptions are not available online

Future Scope

- ➢ Analytics of Patients History on Doctors End
- ➢ Multi Language Support
- ➢ Run models locally so that Internet connection won't be required every time. Once a connection is established, the queued prescription will be synced with cloud.

Our Internal Hackathon Work is added to our private GitHub repository. You can monitor our work progress on this and documentations here. 'github.com:denyshubh/Voice-Prescription.git'. Login credentials are provided below
Username: sih2020vp Password: Sih2020@0804#