

Scribe +

An intelligent voice-
prescription system.

Team Deep Learners – AP63:

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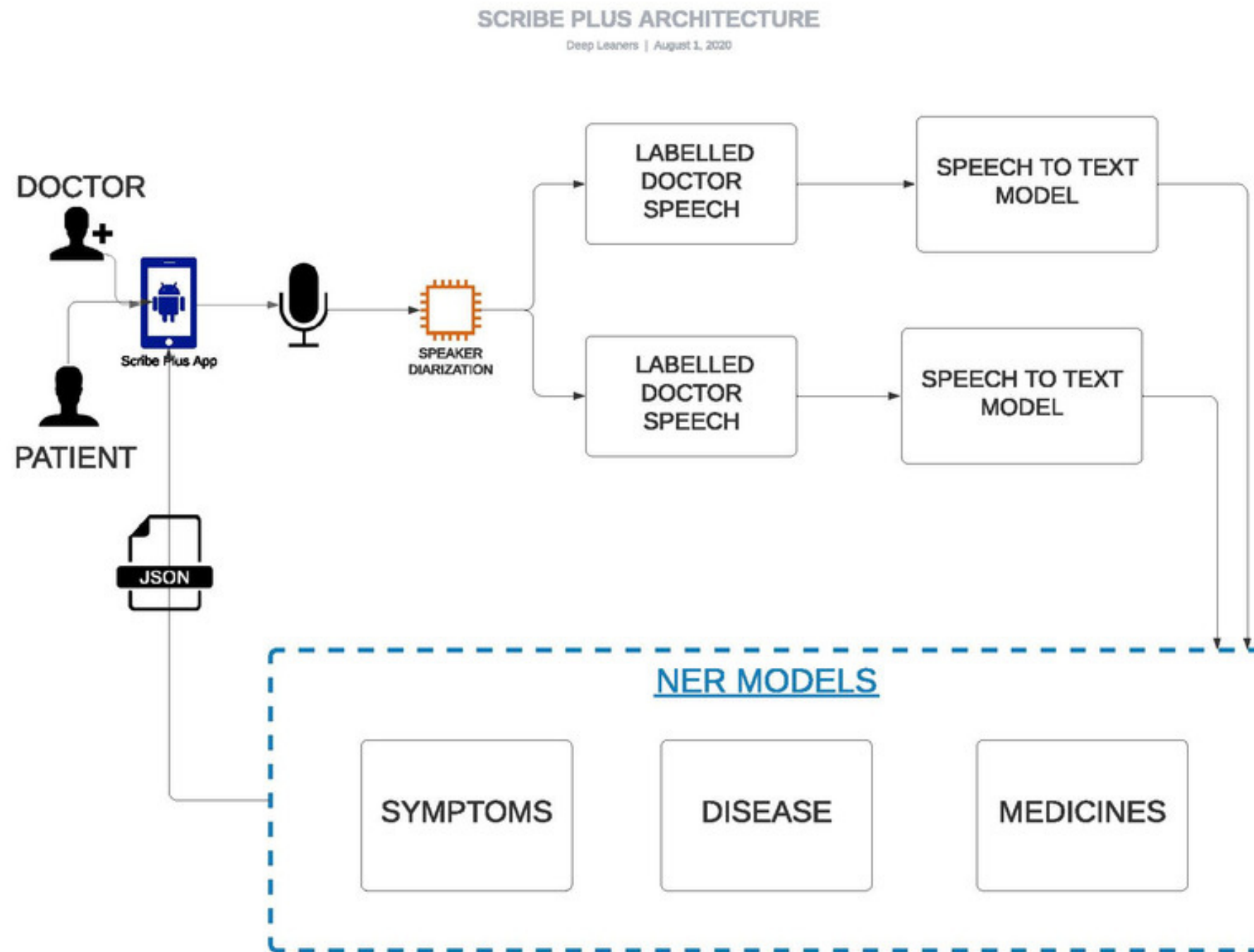
Jahnavi Srividya

Our goals for Scribe +

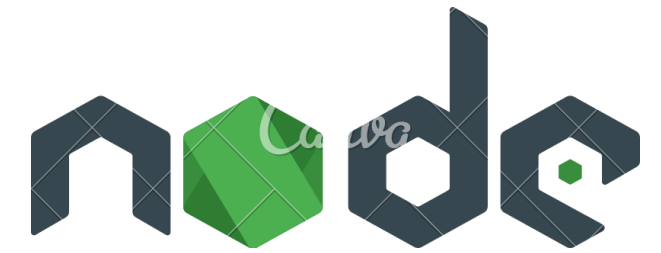
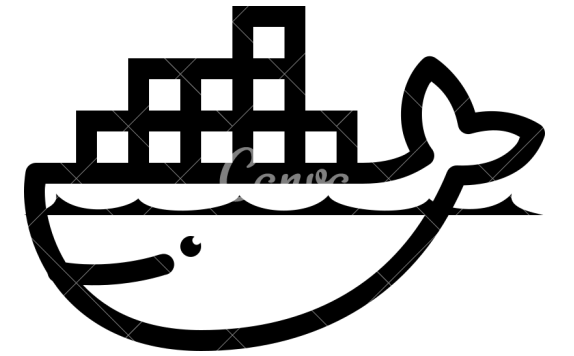
A completely self-reliant voice prescription system

1. Converse naturally - doctor to patient
2. No text input for prescription - low error, lesser time
3. Highly accurate transcription
4. Robust voice model - accent recognition
5. Seamless Speech-to-Text output
6. Smooth UI/UX with complete voice control

The architecture



The tech stack

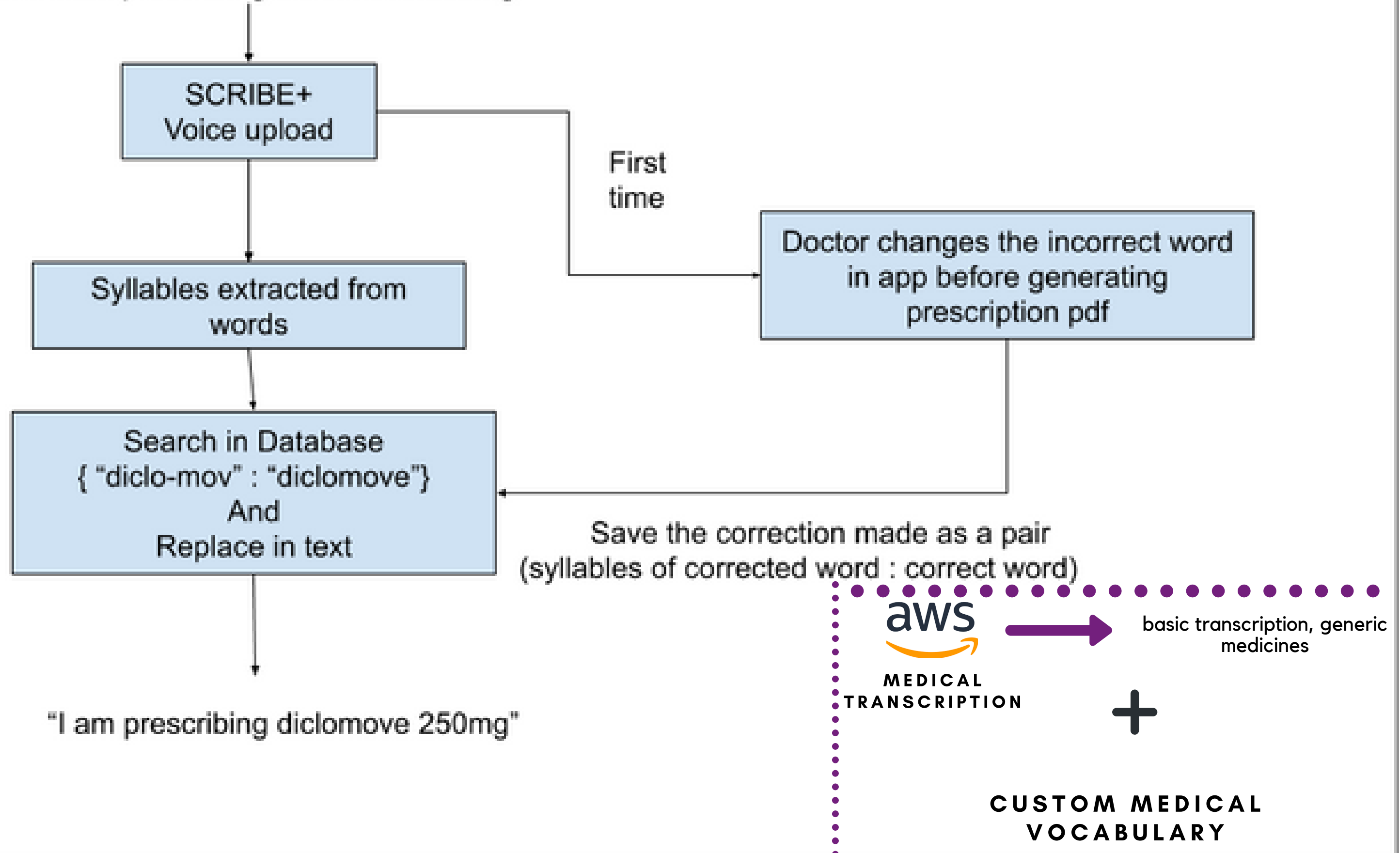


Flask

spaCy

OUR AUTOCORRECT ARCHITECTURE

Doctor : "I am prescribing diclo move 250mg"



Some statistics

Medicines NER Model - MedOps

Open-source Library - Spacy

Built on - Pretrained - English language model of Spacy

Iterations - 100

Dropout - 50%

Data - 20,000 sentences covering over 3,000 Medicine names

Testing -

Given Data - instances from given dataset that was not used for training

External Data - instances from the internet that were not a part of the given dataset

Type of Data	Total Medicines	True predictions	Partial predictions	False predictions
Given Data	800	778	6	0
External Data*	142	16	126	0

*20 Medicines that are not in the given dataset

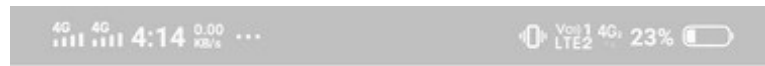
Given data - Partial predictions

'Suprazole until',
'Suprazole to',
'Suprazole and',
'Suprazole for',

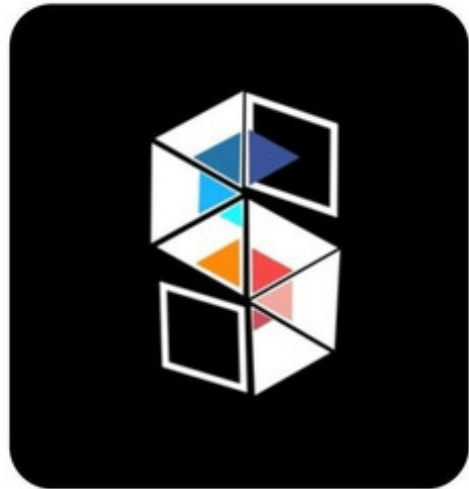
External data - Partial predictions examples

'Ravicti and',
'Mavenclad.',
'Actimmune for',
'Oxervate until',

The output



Welcome to Scribe+



Scan QR Code to get started



SCAN



PASSWORD

next



00:00:00




Anonymous



CEC Hospital

Dr.Rahul M.B.B.S
Dr.Lane,Chennai-88



PH: 1234567890
FAX: rahul@gmail.com

Name : Ferran

Age : 21

Gender : Male

Address : Cee Dee Yes, Velachery, Chennai-60

Date : 8-8-2020

[TAB]

Hydroxychloroquine 20 mg

1-0-1 (AF)

x5
two weeks

[Ointment]

QC 8 Eye Ointment 20ml

0-0-1


20ml
for the next 7 days

Review as needed. Complete rest advised till July.

Mon Aug 03 2020 12:29:58 GMT+0530 (India Standard Time)

Doctor Signature

Powered By



The future of Scribe +

WHAT HELD US BACK?

- Deep learning models perform better with more time, but time was the scarcest resource here
- AWS Transcribe has limitation of 5.00Kb of vocab that can be customized

:

THIS IS NOT THE END.

- DeepSpeech. OpenSource, highly customisable, unlimited vocab, able to handle accents from our 50GB data set.
- This approach extended and built will give reduced latency and higher performance
- With more time and even better resources, this project will be a resounding success.

