NEUROSTELLAR

Experience the Future

VISION AND MISSION

VISION

Interfacing Brain and Machines for the betterment of Humanity.
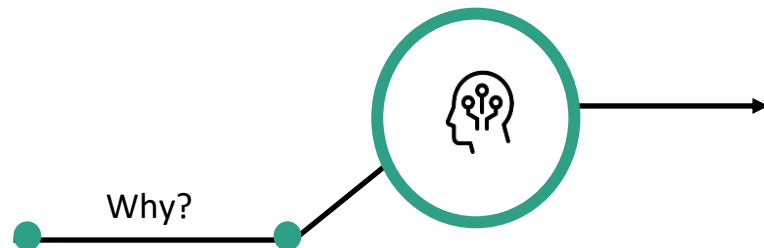
MISSION

2

To build magically impactful products by leveraging the 360º potential of Neurotechnology.

U N M E T   N E E D

Why?

- 50 million people affected by epilepsy worldwide with 10 million people in India. (Src: WHO & NCBI) Ratio between a neurologist and an epilepsy patient in India - **1:3800 (Src NITI Aayog).**
- **Lack of EEG technicians to read and interpret the records**
- **Absence of proper EEG handling channels**
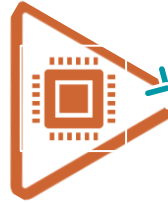
The Consequence
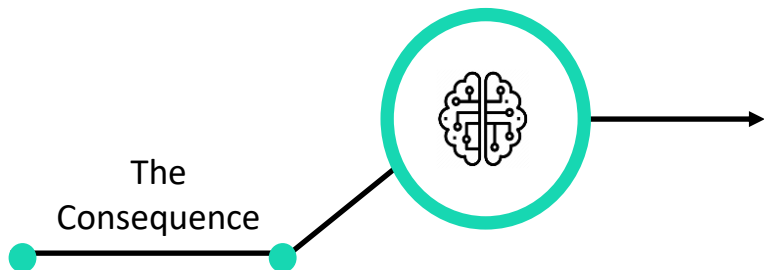
- **with shortage of EEG technician, resulting in mis-interpretation and misdiagnosis**
- **Reduced access to Neurologists**
- **No centralized way to report EEG documents**

[1] WHO intl.20Jun2019.Epilepsy

NOVELTY
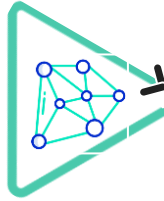
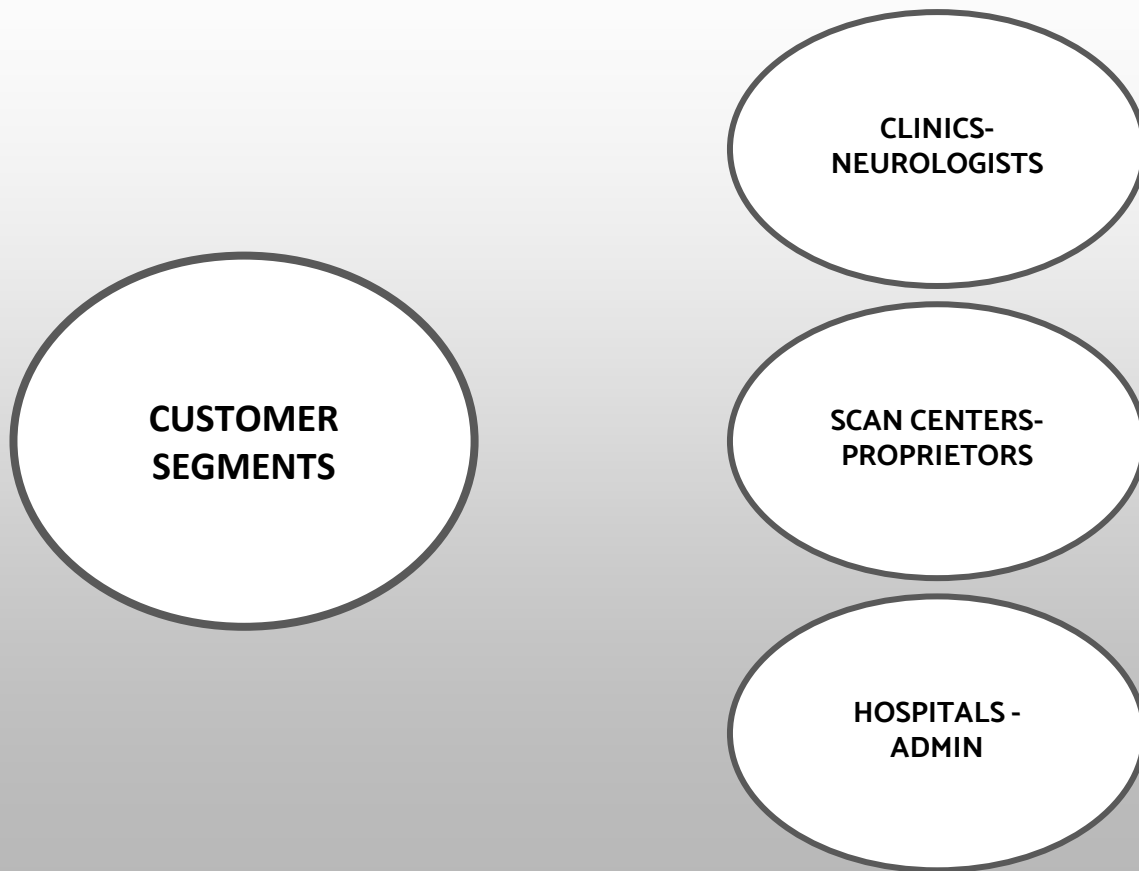Efficient Artefact and Noise Cancellation Algorithm

Accurate Seizure Detection and Noise Cancellation Algorithm

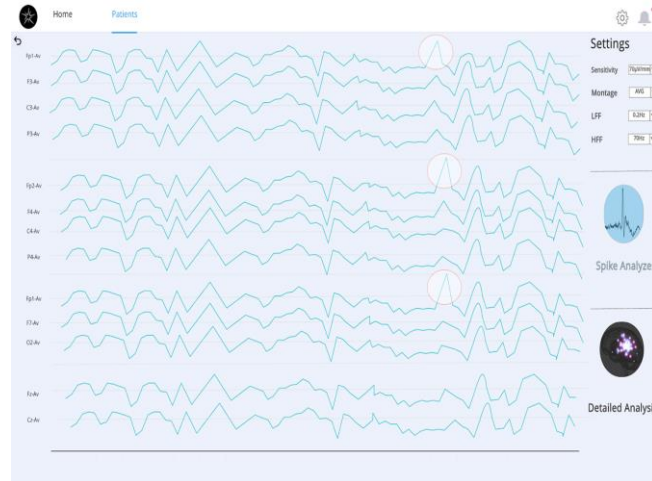Desktop/Mobile Interface for Remote Access of data/report (Telemetry)

CUSTOMER SEGMENTS

CUSTOMER SEGMENTS

CLINICS-NEUROLOGISTS

SCAN CENTERS-PROPRIETORS

HOSPITALS - ADMIN

SOFTWARE FEATURES

Seizure Localization Module

Auto-report Generator

Artefact Reduction

Noise Cancellation

Desktop/ Mobile Interface

EEGTelemetry Application

Application Flow :

1. Doctor/Technician logins to the portal by using his login credentials
2. Technician creates a new EEG report of the patient and upload the EEG File to the server.
3. Doctor can view the EEG file uploaded to the server by using the EEG Viewer and can also make diagnosis from the EEG signals.
4. Various signal processing algorithms can be performed in the EEG viewer screen.
5. The Doctor then uploads his findings and comments in the report.
6. The technician can view the updated Doctors comments and give a copy of the results in pdf format to the patients.
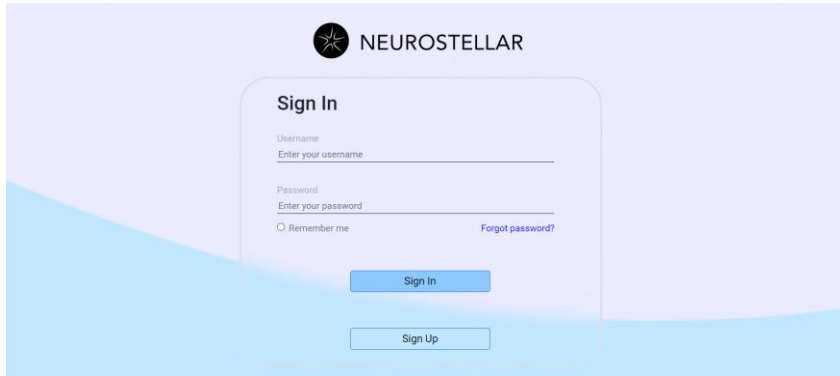
Use Case Of EEGTelemetry Appication :

- Supervising doctors have multiple hospitals/clinics to visit on a regular basis .

- Due to this patients are experiencing delay in getting their EEG scans diagnosed because the physical presence of doctor is needed to diagnose the report as the software is present only in the hospital where patient takes the test and the report cannot be shared anywhere.

- Since this application is entirely hosted as an web application , it reduces the delay occurring in EEG report.

- Complete EEG report diagnosis can be done online by the doctor, even when he is not available in the hospital/clinic.
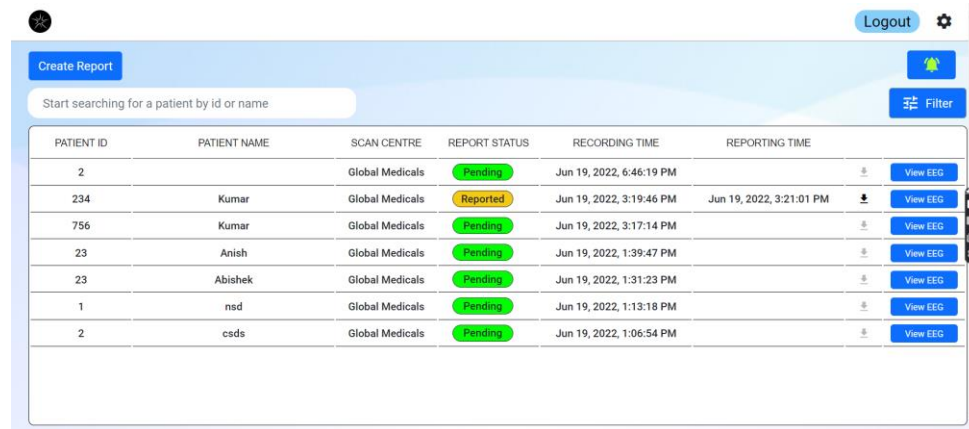
EEGTelemetry Application

Login Page : Technicians and Doctors will have login credentials which will be used to login to the application.

Dashboard Page : The EEG scan report list will be displayed in tabular format in the Dashboard page. Features like Create report, View EEG and Report Pdf Download options are present in dashboard.

EEGTelemetry Application

Create Report : Technicians can create a patient report by entering the patient details and EEG findings along with EEG file. The EEG file gets uploaded to the server.

EEGTelemetry Application

EEG Viewer : The EEG graph and details can be viewed in the EEG Viewer screen. The doctor will be able to make diagnosis based from the EEG signals plotted below and can identify if any abnormalities are present in the patient.

Updated EEG Viewer(Under Development) : EEG Viewer with updated functionalities developed using various signal processing algorithms. This has features for noise and artifact reduction, Filtering.
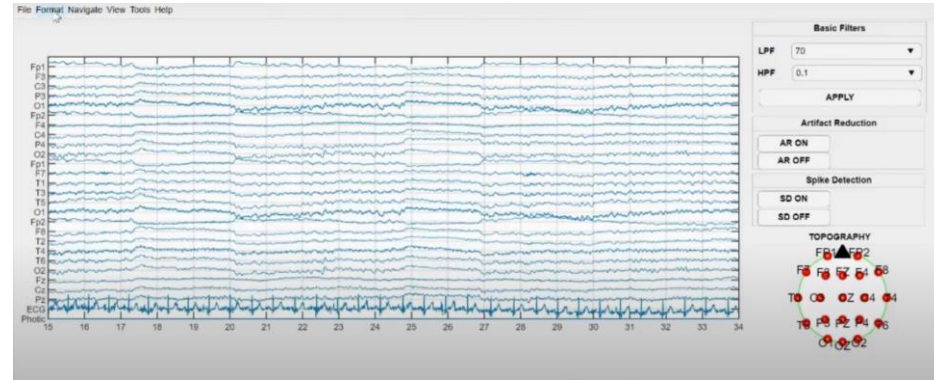
EEGTelemetry Application

EEG Report : EEG report can be downloaded once the doctor completes the diagnosis.It contains all the patient details and the findings and comments of technician/doctor.


Report

Patient ID : 1   Patient Name : Abishek Kannan

DOB : 1997-12-31T00:00:00   Sex : male

Last Seizure : 2021-01-31T10:34:09   Last Meal : 2021-09-30T08:25:09

Current Medication :
Sample Medication-1,Sample Medication-2,Sample Medication-3,Sample Medication-4,Sample Medication-5,Sample Medication-6,Sample Medication-7,

Findings :
Response to opening and closing eyes –symmetry or asymmetry as well as topurposeful movement of the extremities when appropriate.Other non-dominant frequency in the background activity including amplitude,location, symmetry or asymmetry

Interpretation : Normal

Clinical Correlation :
The main feature of the record is paroxysmal bursts of high amplitude spike and slow wave activity at 3.5 Hz recorded from both hemispheres more prominent on the anterior head region

EEG Technoligist   Reporting Neurophysician

PRICING STRATEGY
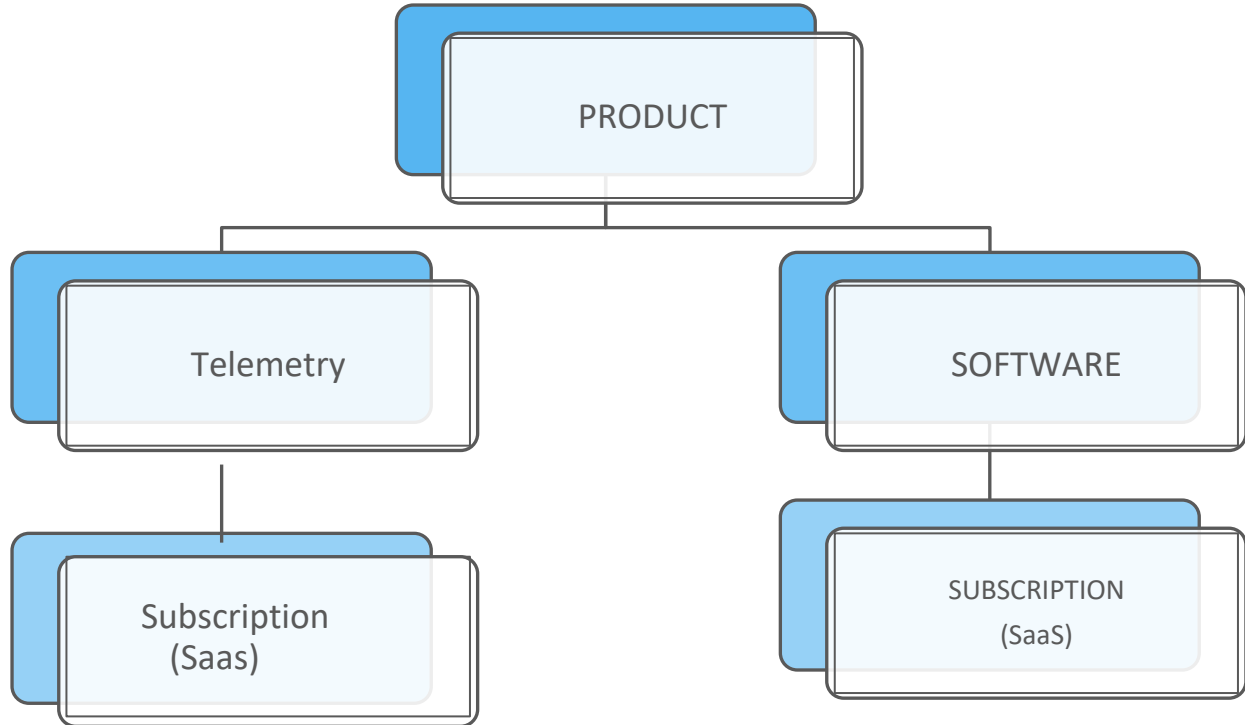
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CO-FOUNDER & COO

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