



universidade
de aveiro

BEEGBRAIN

A multi-tenant system to manage EEG

MID-TERM PRESENTATION

Projeto em Informática
2021/2022

João Reis, 98474
João Farias, 98679
Mariana Rosa, 98390
Ricardo Rodriguez, 98388



WHAT HAVE WE BEEN WORKING ON

Calendar

Name	Date	Module	Type	Attribution	Checkbox
<input checked="" type="checkbox"/> Definir estrutura da BD (protótipo)	March 23, 2022	Database	Task	João Farias João Reis Ricardo Rodriguez	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Arquitetura final	March 29, 2022	Backend	Task	Ricardo Rodriguez João Farias	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Protótipo de Frontend	March 29, 2022	Frontend	Task	Mariana Rosa	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Definir a Base de dados (final)	April 1, 2022	Database	Task	João Farias João Reis Ricardo Rodriguez	<input checked="" type="checkbox"/>
<input type="checkbox"/> Milestone 1	April 5, 2022		Milestones		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Conversão de ficheiros (adiado)	April 20, 2022	Backend	Task	João Reis Ricardo Rodriguez	<input type="checkbox"/>
<input checked="" type="checkbox"/> Criação da API	April 21, 2022	Backend	Task	João Reis Ricardo Rodriguez Mariana Ros	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Implementar o protótipo de frontend	April 22, 2022	Frontend	Task	João Farias Mariana Rosa	<input type="checkbox"/>
<input type="checkbox"/> Milestone 2	April 24, 2022		Milestones		<input type="checkbox"/>
<input checked="" type="checkbox"/> Compressão dos ficheiros (opcional)	May 15, 2022	Backend	Task		<input type="checkbox"/>
<input checked="" type="checkbox"/> Criar ficheiros Docker	May 17, 2022	Deployment	Task	Ricardo Rodriguez	<input type="checkbox"/>
<input checked="" type="checkbox"/> Dar deploy da API	June 1, 2022	Deployment	Task	Mariana Rosa	<input type="checkbox"/>
<input checked="" type="checkbox"/> Dar deploy do website em si	June 6, 2022	Deployment	Task	Mariana Rosa	<input type="checkbox"/>
<input type="checkbox"/> Milestone 3	June 9, 2022		Milestones		<input type="checkbox"/>
<input checked="" type="checkbox"/> Melhorar o frontend de acordo com o fe	June 18, 2022	Frontend	Task	João Farias Mariana Rosa	<input type="checkbox"/>
<input checked="" type="checkbox"/> Testes de high-order	June 20, 2022	Testing	Task	João Reis Mariana Rosa	<input type="checkbox"/>
<input checked="" type="checkbox"/> Testes de integração	June 20, 2022	Testing	Task	João Farias Ricardo Rodriguez	<input type="checkbox"/>
<input checked="" type="checkbox"/> Testes unitários	June 20, 2022	Testing	Task	João Reis Mariana Rosa	<input type="checkbox"/>

Tasks Progression

Tasks

- API Creation [100%]
- Implementation frontend prototype [40%]
- File Conversion [postponed]
- Connect frontend with the API [100%]

New tasks

- Explore the best way to plot EDF files [90%]

First stage prototype frontend implementation

BeegBrain

Dashboard Workspace

Filtros

Data: [dropdown]
Data (mais recente)
Data (mais antigo p [dropdown])

Paciente: [dropdown]

Médico: [dropdown]

Instituição: [dropdown]

Estado: [dropdown]
Entregues
Por analisar
Prioritárias

5 EEG with Error

search by EEG ID

upload

EEG ID	Patient	Exam date	Status	Analyse
jonikings81526	Joni King	29/03/2021	✓	👁
marychanel81530	Mary Chanel	30/01/2001		👁
thefalzers81540	The Falzers	05/02/2009	✓	👁
bernos81550	Bernos	06/12/2009	✓	👁

BEEGBRAIN Dashboard Workspace Patients LogProfile

EEG ID

ID

Patient

SSN

Name

Date

mm/dd/yyyy

Operator

SSN

Name

Priority

Urgent

PI - 2021/2022

EEG Exams

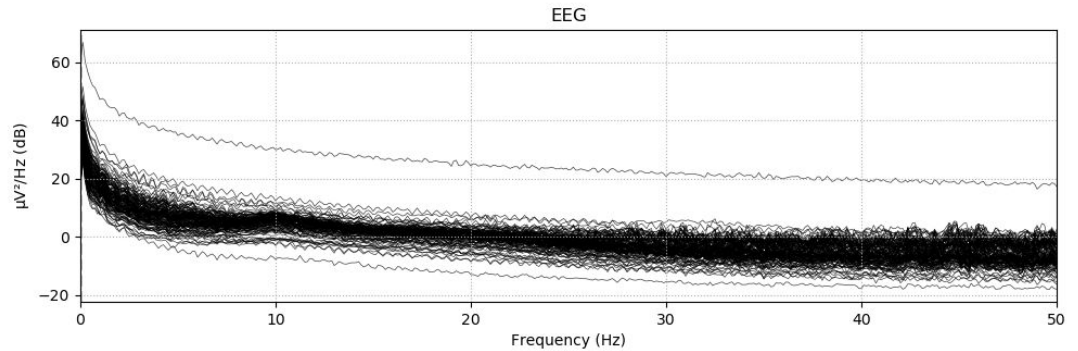
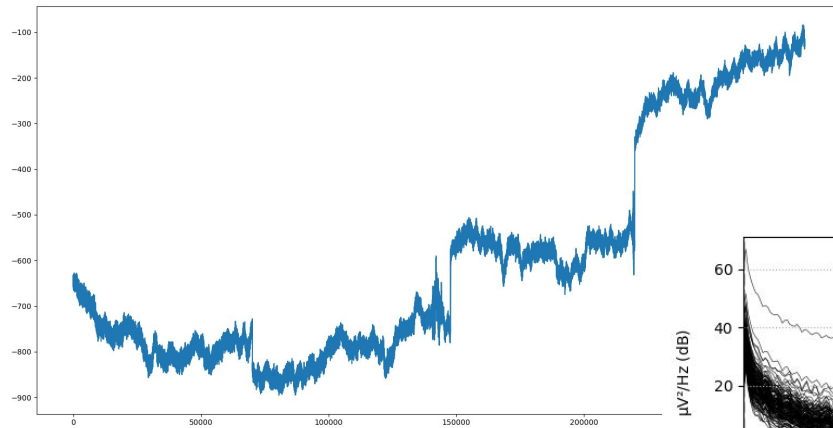
Overview of the projects

Exam ID	Patient	Status	Analyse
Hanna Gover hgover@gmail.com	Flexy React	●	👁
Hanna Gover hgover@gmail.com	Landing pro React	●	👁
Hanna Gover hgover@gmail.com	Elite React	●	👁
Hanna Gover hgover@gmail.com	Ample React	●	👁

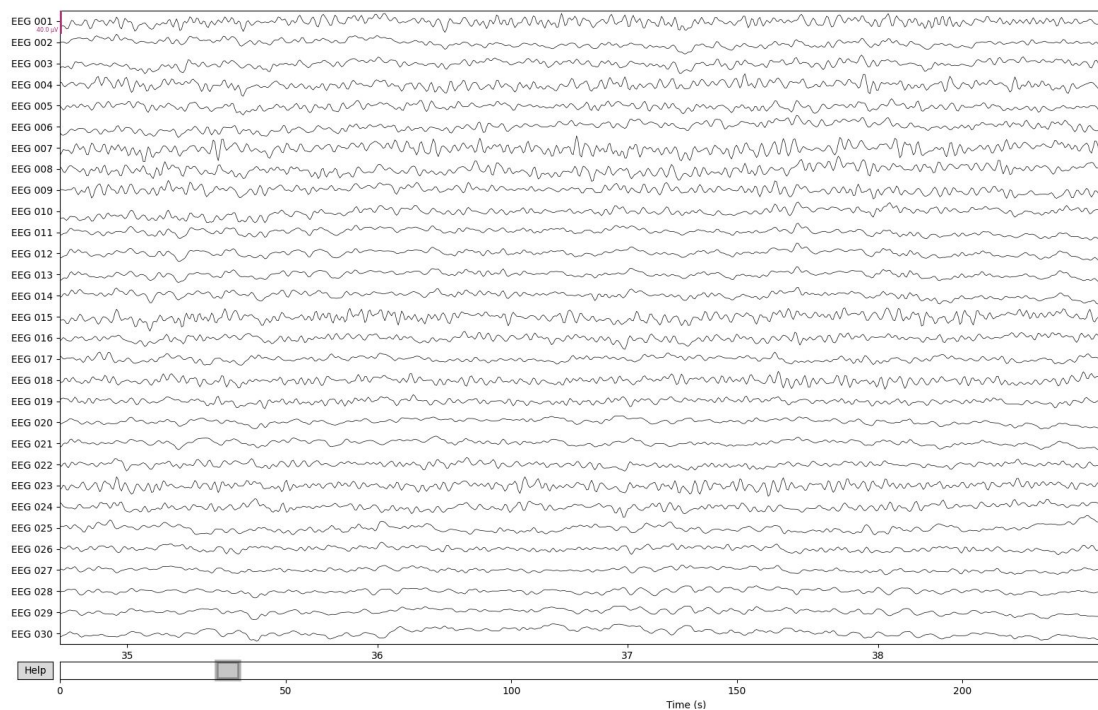
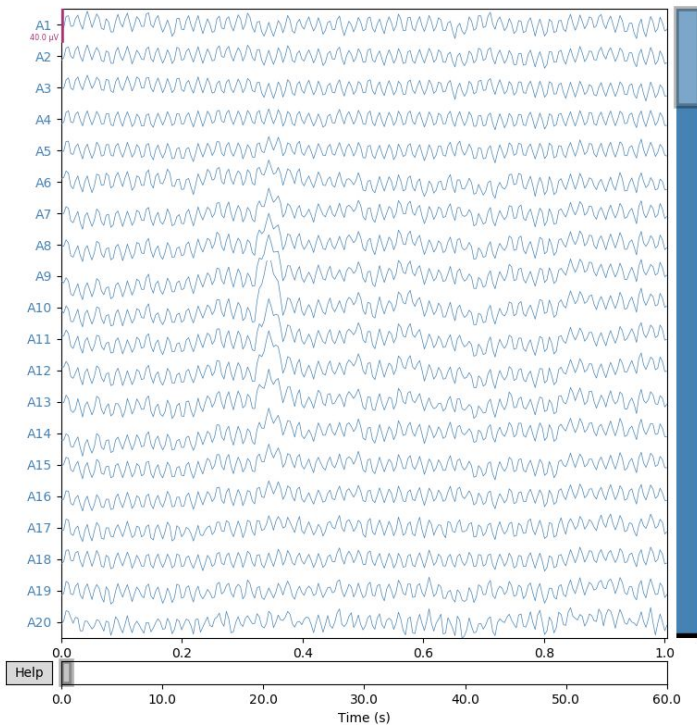
BEEGBRAIN

CHANGES IN THE INITIAL PLAN

1) Explore the best way to plot EDF files



1) Explore the best way to plot EDF files

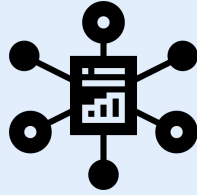


2) Changes in application

- Splitting EEG by channels → therefore there will not be overload of information;
- EEG will be send slowly according to the period of time selected, streaming data block by block.

DIFFICULTIES

Our Difficulties



1. Learning Angular and Django frameworks



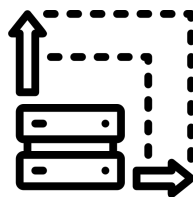
2. Understanding EEG and plot libraries

OUR FEARS

Our Fears



1. Difficult to convert
some file formats



2. Scalability



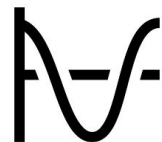
3. Plot performance

FUTURE WORK

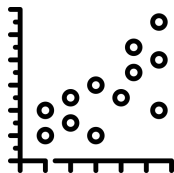
Future Work



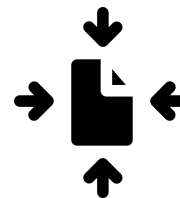
1. Improving Frontend and Backend modules



3. Stream data to plot



2. Plot signals in Frontend



4. EEG compression

Thank you!

To get more info, check out our website

<https://beegbrain.netlify.app/>