

# mjn-SERAS device (episeras®), improving long-term EEG recording and seizure forecasting

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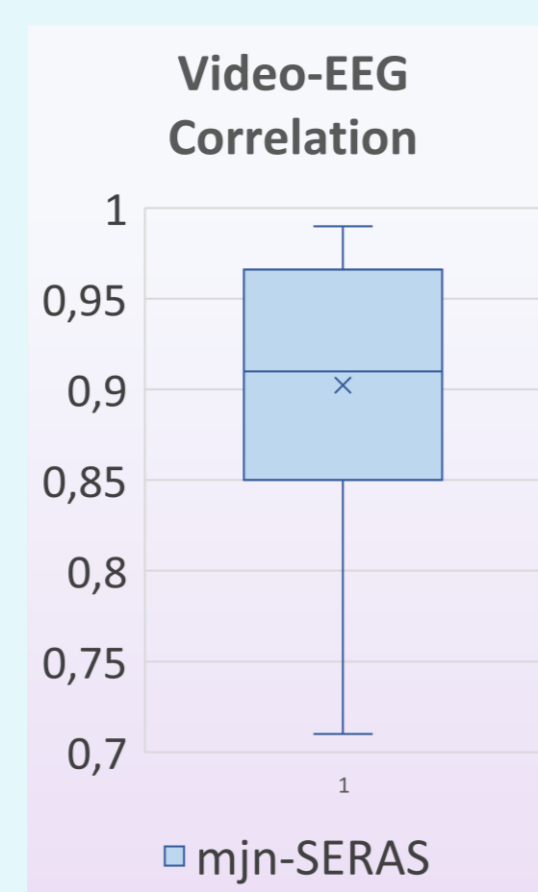
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## Background

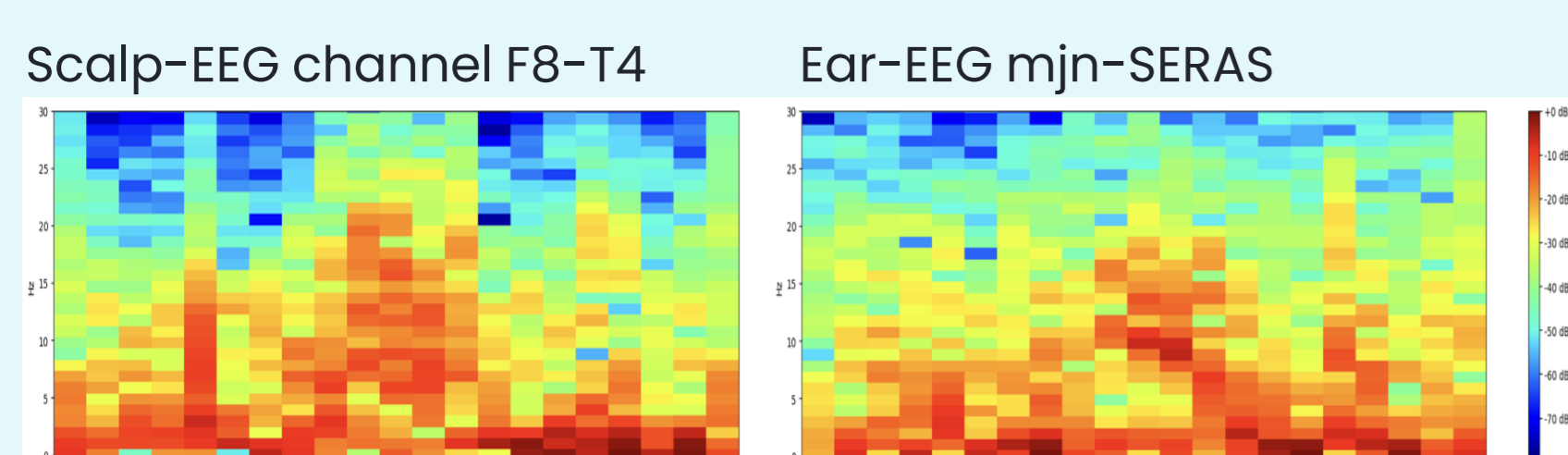
David, our CEO, established MJN with a deeply personal motivation – his daughter, Marina, was diagnosed with epilepsy at the age of two.

Our core mission has always been **to improve the quality of life** for individuals like Marina and others affected by epilepsy through the development of innovative technology.

Since 2012, we've been dedicated to creating a solution centered around **ear-EEG devices**, and we've successfully achieved a strong correlation with traditional scalp-EEG recordings.



**Artificial intelligence** has played a pivotal role in our project, enabling us to identify **pre-ictal patterns** in brain signals.



## Materials & Methods

Product development has a patient-centered approach, with a strong focus on designing the device to be:

- Wearable and discreet
- Personalized
- Comfortable
- Non-invasive

With the objective of minimizing accidents, alleviating anxiety and uncertainty, and enhancing patient autonomy



The most significant challenge lies in crafting algorithms for seizure prediction patterns that are tailored to each individual user, made possible through the innovation in AI methodologies and data processing techniques

## Results & Conclusions

Since 2019, we have reached significant milestones and achieved remarkable results:

- **2019, EPISOFT CT** (n=50)  
Enhancing the Performance of the mjn-SERAS AI Algorithm for Early Seizure Detection  
**Sensitivity : 94,7%**
- **2021, SERAS-EEG CT** (n=30)  
Concurrent Video-EEG and mjn-SERAS Recording for Correlation Analysis  
**Global correlation : 90,2%**
- **2023, SERAS-Home CT** (n=150)  
Validation of the Solution in Patients' Everyday Lives: Evaluating Quality of Life, accident, incidences and performance.
- **Commercialization**  
Distribution Partnership with Neuraxpharm: renaming device as episeras, set to be accessible in the majority of European countries in the near future.