JULES GOMEL

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OBJECTIVE

MSc Student at ISAE-Supaero before starting a Ph.D in late 2024 on Brain-Computer Interfaces and information encoding using visual stimuli, under the supervision of Dr. Frederic Dehais.

EDUCATION

Master of Neuroengineering and Signal Processing, ISAE-Supaero (FRANCE) Expected October 2024

Bachelor of Mathematics, Physics and Engineering science, ISAE-Supaero (FRANCE) 2018 - 2021
Including two years of intense preparatory classes for grandes écoles entrance exam.

SKILLS

Technical Skills Signal processing, Machine Learning, Coding in Python, Javascript
Soft Skills Teamwork, Oral communication, Leadership, Passion

EXPERIENCE

Research Engineer Mar - Sep 2024
ISAE-Supaero under the supervision of Dr Frederic Dehais *Toulouse, FRANCE*

- Added multiple features to the Brain-Computer Interface developed in the lab with Timeflux, in Python, HTML, CSS and Javascript : Event-Related Potential visualization in real time, Cross-Validation and new Tasks.
- Designed an experiment to assess the performances of the gating of our system.

Research Technician Mar - Aug 2023
Drexel University, under the supervision of Dr Hasan Ayaz *Philadelphia, PA (USA)*

- Developed a Generative Adversarial Network model to predict missing fNIRS data, using Pytorch.
- Realized a benchmark of data generation methods for motion artifacts correction in fNIRS data, comparing deep learning and machine learning techniques.
- Article in preparation.

Research Engineer Mar - Aug 2022
Toulouse Neuroimaging Center, under the supervision of Dr David Gasq (PhD, MD) *Toulouse (FRANCE)*

- Developed a motion tracking algorithm in MATLAB with inertial measurement units.
- Develop a user interface in MATLAB for accessibility to praticians.
- Designed a standard protocol for data collection.

PROJECTS

EEG-Stroke Developed in team a computer application to detect intention of movements in electroencephalogram data, using Python. This app is aimed to be used for neurofeedback applications for post-stroke reeducation.

EXTRA-CURRICULAR ACTIVITIES

- Quality Manager for a student sport event (RAID-ISAE). We were certified ISO-20121 standards under my supervision.
- Working as a part time Library Assistant at the campus library of ISAE-Supaero.