Université Ibn Tofail
جامعة ابن طفيل
Faculté des Sciences

Course In Advanced Artificial Intelligence

EEG DATA ANALYSIS

08 - 20 Mai 2023

Faculty of Science Ibn Tofail University

INSTRUCTOR
Mohamed QUAFAFOU

PROFESSOR | AIX-MARSEILLE UNIVERSITY

Keypoints of this course

⊙ Comprehensive coverage of brain data analysis techniques.
⊙ Practical skills with low-cost mobile EEG and real-world applications.
⊙ Exposure to classical and deep learning algorithms for machine learning.

The course is open to all computer science students at the Ibn Tofail University. However, admission to the course is subject to availability.
Registration is mandatory and closes on May 6th, 2023.

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About this Course

This course introduces brain data analysis, underlying its main challenges and usefulness in real-world applications. We start with an introduction to machine learning and data processing, considering data's spatial, temporal, and spectral dimensions. We discuss data acquisition using low-cost mobile EEG and its impact on the quality of the collected data. Next, we will study the different methods of pre-processing (load, filter, window, etc.). In particular, we introduce methods to compute features that characterize the acquired signals and transform and clean the data. Then, we explain how to build the datasets used during the training, refinement, and testing of models. We consider both classical machine learning algorithms and deep learning architectures. Finally, we illustrate our remarks with real-world applications, such as a mobile phone application that predicts the emotional state of a given person.

Contact

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