

Interpretability of Deep Learning

Br.A.In.

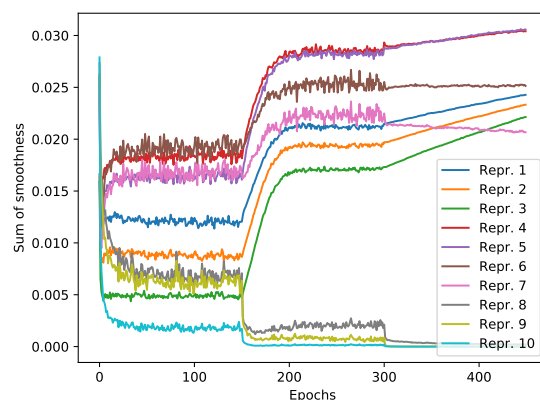
1 Overview

The fundamental question of understanding the functioning of Deep Learning is a very active field of research. Many research groups have proposed their explanation for the performance of these systems, while others have proposed solutions to visualize inner layers activities.

The Br.A.IN. team has recently started a research activity on the field, with the following motivations:

- Characterizing the role of each intermediate representations in deep learning architectures,
- Providing a nonsupervised way of detecting overfitting,
- Proposing automatic choices of hyperparameters,
- Visualizing key factors that amount to the decision of a deep learning architecture, specially in the domain of brain signals.

Keywords: Deep Learning, Graph Signal Processing, Visualization



2 Professors involved

- Nicolas Farrugia
- Vincent Gripon

References

- [1] Vincent Gripon, Antonio Ortega, and Benjamin Girault. An inside look at deep neural networks using graph signal processing. In *Proceedings of ITA*, February 2018.