

# Certificate of participation

Hugo Oliveira

took part from 14th to 16th May 2024 in the training course

## **Introduction to Explainable Deep Learning on Supercomputers**

given by Sabrina Narimene Benassou, Dr. Alina Bazarova (JSC), Dr. Donatella Cea, Dr. Lisa Borros de Andrade e Sousa, Dr. Elisabeth Georgii, Francesco Campi and Dr. Florian Kofler (Helmholtz Munich) as part of the training programme of Forschungszentrum Jülich.

The course started with a broad overview of XAI, setting the stage for a deep dive into cutting-edge model-agnostic interpretation techniques. As the course progresses, we shifted our focus to model-specific post-hoc interpretation methods. Through immersive training, participants learned to interpret machine learning algorithms and unravel the intricacies of deep neural networks, such as convolutional neural networks (CNN) and transformers. They also became skills in applying these techniques to various data formats, encompassing tabular data, images, and 1D data.

In addition to theoretical insights, participants engaged in hands-on practical sessions to apply these techniques effectively.

### **Learning outcome**

- Gain an appreciation for the significance of XAI.
- Explore the available model-agnostic and model-specific XAI methodologies.
- Acquire the skills to interpret the results and visualizations of these methodologies through practical exercises.
- Master the skill of applying XAI techniques to diverse data types, including tabular data, images, and 1D data.
- Develop the ability to discern the most appropriate XAI method for a given task.

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