High Performance Artificial Intelligence
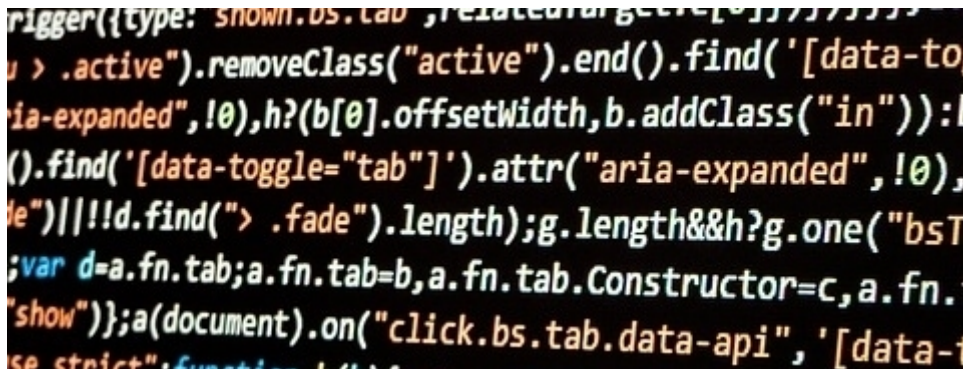

The High Performance Artificial Intelligence group focuses on the research and application of AI techniques using HPC tools and infrastructure. Typically, HPC requirements come from computationally expensive AI methods (e.g., Deep Learning) and/or large-scale datasets (e.g., massive networks). In this context, the group does pure AI research trying to advance the current state-of-the-art, but also seeks to apply AI methods to solve societal and scientific challenges identified within and outside of BSC. See hpai.bsc.es for more details.

Objectives

The objectives of the team can be sumarized as follows:

- Contribute to the state-of-the-art of Artificial Intelligence research, mostly in machine learning (e.g., deep learning) and graph analytics (i.e., network analysis). To disseminate these contributions we target publications in top AI conferences and journals.
- Integrating HPC tools and infrastructure with AI methods. This includes tackling issues related with parallelism, persistency and scalability, and using the supercomputers available at BSC.
- Using state-of-the-art AI techniques to tackle societal and scientific challenges of relevance. These challenges may originate from other research being done at BSC, or from public or private institutions outside of BSC.
- Dissemination of our knowledge on AI to the community, both inside and outside BSC. This is implemented through seminars at BSC, courses in public institutions (e.g., UPC) and other online materials.

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