

SUPERCOMPUTING FOR ARTIFICIAL INTELLIGENCE

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ABSTRACT

Artificial intelligence presents a broad field that makes advances in data mining, image processing, natural language processing, outlier detection, IoT, smart cities, and many others. Applications based on artificial intelligence relies on machine learning algorithms and could be present in different environments and deployment locations. Recently, the size of data publicly available has rapidly increased which led to utilization of alternative paradigms, such as control-flow and dataflow, for processing such amounts of data in machine learning algorithms. Control-flow paradigm presents a conventional paradigm for processing that is suitable for general purposes. The dataflow paradigm presents a novel paradigm that relies on execution graphs and reconfigurable hardware that could achieve acceleration.

Therefore, this mini-symposium aims to shed light on the synergy of artificial intelligence and its machine learning algorithms, on one side, and two important computing paradigms, control-flow and dataflow, on the other side. Topics may include the application of AI in image processing, natural language processing, outlier detection, IoT, smart cities, and many others.