Special Issue

Advancements in Hardware-Efficient Machine Learning

Message from the Guest Editor

Machine learning has rapidly evolved in recent years, driving innovation across industries and research fields. As machine learning models grow more complex, there is a pressing need for hardware systems that can support these models efficiently, without compromising speed or power consumption. This growing demand has given rise to new advancements in hardware-efficient machine learning, which focuses on optimizing the interaction between machine learning algorithms and the hardware they run on, from edge devices to high-performance computing systems. The challenge of hardware-efficient machine learning is to deliver high-performance models while minimizing power, area, and energy consumption. This includes novel hardware architectures, algorithmic optimizations, and the use of hardware accelerators such as GPUs, TPUs, and FPGAs to enhance the performance and efficiency of machine learning systems. The aim of this Special Issue is to present state-of-the-art research that addresses these challenges, highlighting innovative approaches to making machine learning more efficient from a hardware perspective.

Guest Editor

Dr. Ameer M.S. Abdelhadi
Department of Electrical and Computer Engineering, McMaster University, Hamilton, ON L8S 4L8, Canada

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Electronics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
electronics@mdpi.com

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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