Workshop on Scientific Use of Machine Learning on Low-Power Devices: Applications and Advanced Topics

ICTP

17 - 21 April 2023
An ICTP Virtual Meeting
Trieste, Italy

TinyML is a subfield of Machine Learning focused on developing models that can be executed on small, real-time, low-power, and low-cost embedded devices. This allows for new scientific applications to be developed at an extremely low cost and at large scale.

Directors:

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Description:

TinyML represents a collaborative effort between the embedded power systems and Machine Learning communities, which traditionally have operated independently.

TinyML has a significant role to play in achieving the SDGs and facilitating scientific research in areas such as environmental monitoring, physics of complex systems and energy management.

The TinyML process starts with collecting data from IoT devices, then training the collected dataset to extract knowledge patterns; these patterns are then packaged into a TinyML model that considers the target microprocessor's limited resources such as memory, processing power, and energy.

Through hands-on examples, this workshop will focus on both introductory and advanced topics in TinyML to pave the way to the development of real-world applications.

Topics:

- Introduction to TinyML
- Getting Started with the TinyML Kit
- Examples of TinyML Applications
- The TinyML Development Workflow
- Scientific Applications of ML
- Recent Research and Advanced Topics in TinyML

Local Organiser:

M. ZENNARO, ICTP, Italy

How to apply:

Online application:
http://indico.ictp.it/event/10166/

Female scientists are encouraged to apply.

Registration:

There is no registration fee.

Deadline:

7 April 2023

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