

African Regional Workshop on SciTinyML: Scientific Use of Machine Learning on Low-Power Devices



25 - 29 April 2022
Online

Further information:
<http://indico.ictp.it/event/9792/>
smr3708@ictp.it

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:

Vijay Janapa REDDI,
John A. Paulson School of Engineering and
Applied Sciences, Harvard University, USA

Gregg BARRETT,
AI Africa Consortium, South Africa

Description:

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 and processing power.

The resulting model is then deployed on embedded devices where it is used to evaluate new sensor data in real-time. Typically, power requirements are in the mW range and below which enables a variety of use-cases targeting battery operated devices. TinyML represents a collaborative effort between the embedded power systems and Machine Learning communities, which traditionally have operated independently.

Topics:

- ML general concepts
- Introduction to TinyML
- Getting started with the TinyML training kit
- Examples of TinyML applications
- Scientific Applications of ML

Local Organiser:

Marco ZENNARO, ICTP

How to apply:

Online application:
<http://indico.ictp.it/event/9792/>

Female scientists are encouraged to apply.

Grants:

Priority will be given to African participants that are part of the ICTP TinyML Academic Network.

Deadline:

15 April 2022



Harvard John A. Paulson
School of Engineering
and Applied Sciences



The Abdus Salam
International Centre
for Theoretical Physics
www.ictp.it
Trieste, Italy

