The Abdus Salam International Centre for Theoretical Physics

IAEA International Atomic Energy Agency

unesco United Nations Educational, Scientific and Cultural Organization

ICTP 1964–2024

Workshop on TinyML for Sustainable Development

Description:

TinyML enables machine learning on low-power microcontrollers, democratizing access to performant AI in remote, resource-constrained settings. This revolutionary technology unlocks new possibilities for sustainable development and scientific research by increasing equitable access to on-device intelligence worldwide.

MORE DETAILS:

The emergence of TinyML has created new possibilities for building smart, ultra low-power devices ideal for resource-constrained settings. In recent years, TinyML has attracted significant interest from researchers, developers, and industries for its potential to enable innovative applications in healthcare, agriculture, transportation, conservation, smart homes, and more. TinyML's extremely low bandwidth and energy requirements make it uniquely suited for regions with limited access to reliable energy and computing infrastructure. Though currently restricted in reach, TinyML intersects topics across computer science and engineering curricula, making it an impactful educational tool. This hands-on workshop focuses on TinyML applications relevant to Latin American researchers, providing training on commercially available hardware optimized for embedded ML deployment. By making TinyML more accessible, especially in the Global South, this workshop will empower researchers to develop localized solutions that benefit their communities.

TOPICS:

- Introduction to TinyML
- Sensors and Data Collection
- Energy Efficiency
- Environmental Monitoring
- Health Monitoring
- Agriculture Monitoring
- Smart Cities
- Ethics and TinyML

KEYNOTE SPEAKER:

R. M. O. GALVÃO
President, National Council for Scientific and Technological Development, Brazil

22 - 26 July 2024

São Paulo, Brazil

Deadline:

6 May 2024

DIRECTORS:

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Female scientists are encouraged to apply.

GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries.
There is no registration fee.

Harvard John A. Paulson School of Engineering and Applied Sciences

IBM

UNIFEI

TINY ML FOUNDATION