Latin American regional workshop on SciTinyML: Scientific Use of Machine Learning on Low-Power Devices

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Thanks!

Thanks!

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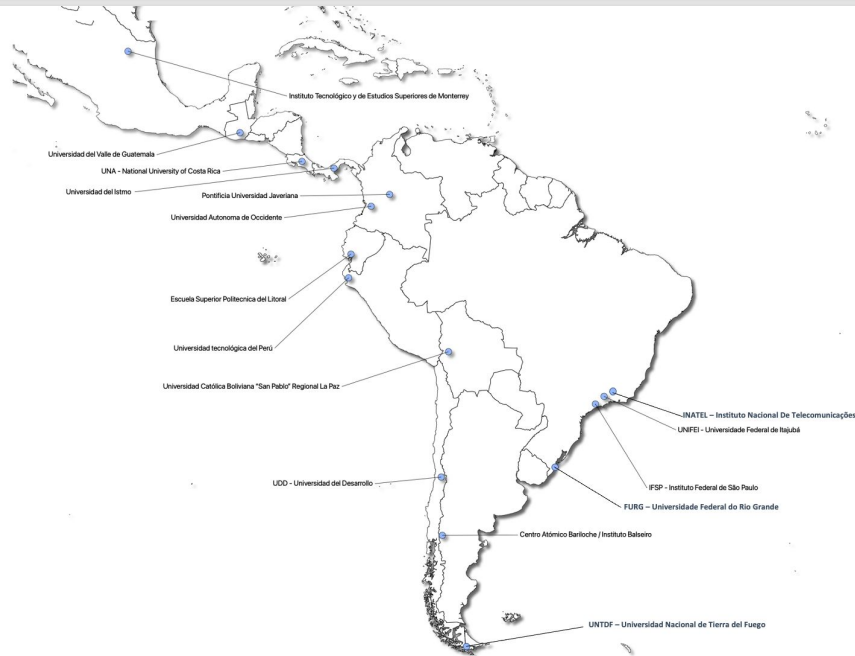
Opportunities

Join the Edge Impulse University program:

https://edgeimpulse.com/university

Participate in the AI for Good Challenge:

https://aiforgood.itu.int

Edge Impulse University program

Free hardware kits

10 Arduino Kits

Learning resources

Access to lesson plans and sample projects

Online training

Access to training videos

Community support

Join a Discord channel of edge ML experts

AI for Good Challenge

TinyML Challenge 2022: Smart weather station

Developing Countries is the area of the globe where land-based, in situ monitoring of weather and climate is at its scarcest, but at the same time has arguably the most potential to benefit society.

Rainfall and temperature can have high spatial variability due to the strong feedback that can exist between the land and atmosphere. Temperature can change rapidly in space due to land-cover heterogeneity and changing altitude over complex mountainous terrain. This means that a weather station tens of kilometers away may measure conditions that have little relevance to your location, making it hard to make informed local decisions.

The goal of this challenge is to create a low-cost, low-power, reliable, accurate, easy to install and maintain weather station, with no mechanical moving parts for measuring all weather conditions with a focus on rain and wind, based on TinyML, that can be deployed locally.

This talk will introduce the 2022 tinyML Challenge and how you can participate in this Challenge.

Milestones and checkpoints

*Monday July 25, 2022 - **Proposal submission***
Submit your project proposal to receive initial feedback and be notified of available development resources.

*Monday August 15, 2022 - **Dataset checkpoint***
Submit your rich and diverse dataset early to receive extra bonus points by the judges. (Optional and not all submissions will receive feedback.)

*Monday September 5, 2022 - **Model checkpoint***
Submit your tinyML model early to receive extra bonus points by the judges. (Optional and not all submissions will receive feedback.)

*Monday October 3, 2022 - **Device checkpoint***
Submit a video of your tiny ML model working on an embedded device to receive extra bonus points by the judges. (Optional and not all submissions will receive feedback.)

*Monday November 14, 2022 - **Final submission***
Submit your fully functional weather station project for a chance to win the tinyML Challenge.

Submit:

- Final project write-up accompanied by photos and videos of your weather station prototype.
- Final dataset
- Final tiny ML model
- Final embedded application

Networking

Please use the "**ictp-workshop**" Discord channel!

Please join Discord by following this link: https://discord.gg/zKWgwhSAEY if you haven't already done so!

We will post **news**, **opportunities**, **workshops** only on Discord.

Learning and Teaching

If you want to learn more about TinyML:
https://tinyMLedu.org/learn

If you want to teach a course on TinyML:
https://tinyMLedu.org/teach

edX tinyML Specialization	Launched 2020-2022	Everyone	English	English	Course 1-3 Website Course 4 Website All Materials All Colabs Arduino Library
UNIFEI IESTI01 TinyML - Machine Learning for Embedding Devices	Jan 2021 - Present	Undergraduate Students	Portuguese	English	2022.1 Website and Materials 2021.2 Website and Materials 2021.1 Website and Materials

Certificates

ICTP attendance certificates will be sent as soon as we analyze the Zoom logs.

Participants that have attended >80% of lectures.

Any questions should be sent to: smr3721@ictp.it

Let us know!

Please fill in this post-workshop survey:

https://bit.ly/SciTinyML-22-Latam-Post

… and let us know if you will work on TinyML projects, courses, research!

Let us know!

"The amount of serendipity that will occur in your life, your **Luck Surface Area**, is directly proportional to the degree to which you do something you're passionate about combined with the total number of people to whom this is effectively communicated."

https://github.com/readme/guides/publishing-your-work

Let us know!

Going further, he codifies it into a formula where:

Luck = [Doing Things] * [Telling People]

The more things you do multiplied by the more people you tell, the larger your Luck Surface Area becomes!