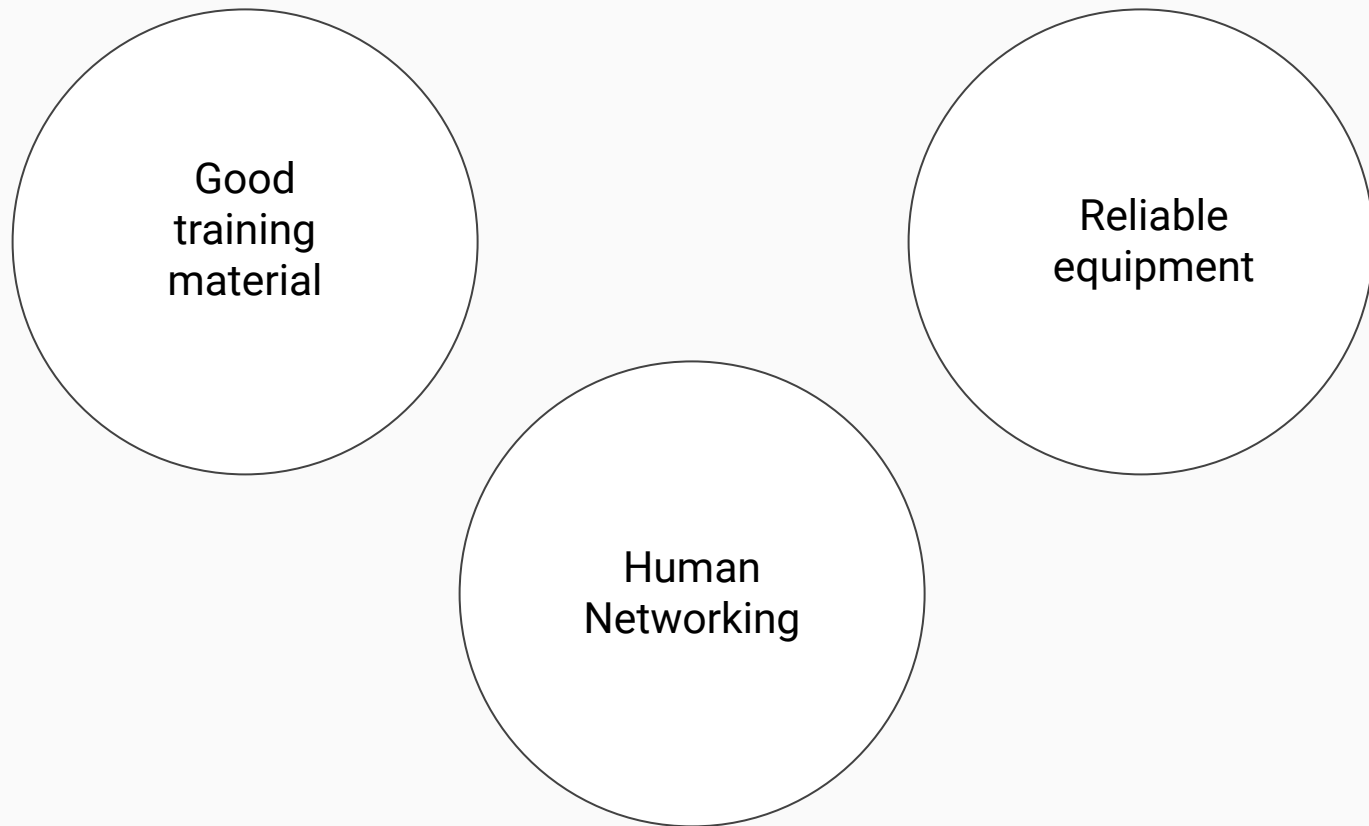# TinyML Seminar #3

Marco Zennaro,
mzennaro@ictp.it

Why a TinyML Academic Network?

We aim to ultimately develop a **community of researchers and practitioners** focused on both improving **access to TinyML education** and **enabling innovative solutions** for the unique challenges faced by Developing Countries.
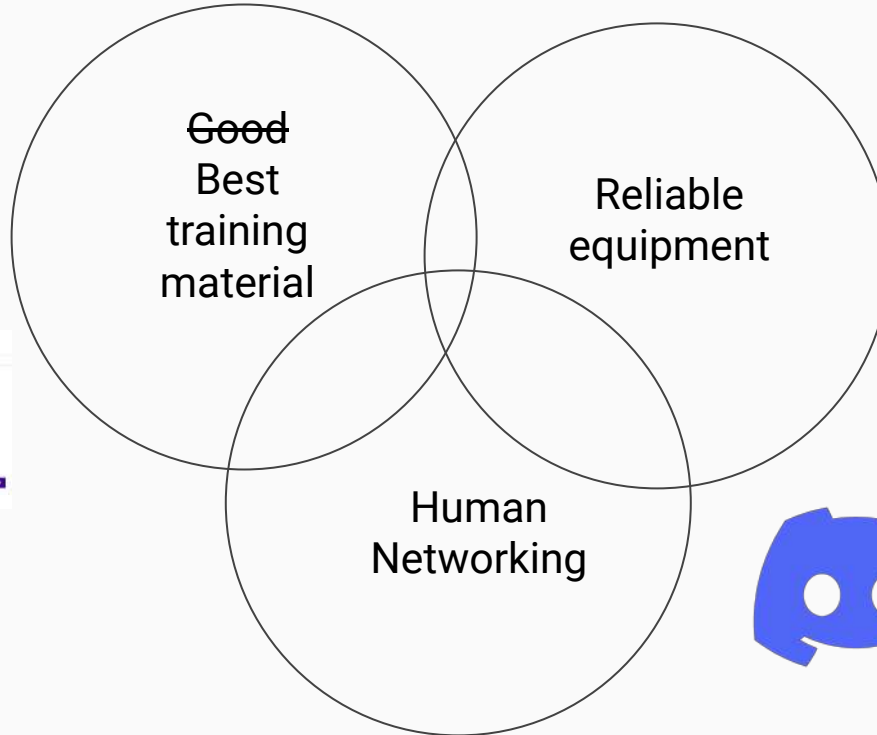
- Joint **workshops and seminars** on TinyML with lab sessions hosted by and for network members

- An **online forum** to consolidate the TinyML community of researchers, educators, and practitioners

- **Open exchange** of student projects, lesson plans, real-world deployments and outreach materials

TinyML Academic Network

Good training material

Reliable equipment

Human Networking

TinyML Academic Network

Best training material

~~Good~~

Reliable equipment

Human Networking

TinyML academic network

~~Good~~
Best
training
material

- *September 17*: Academic Network Introduction and Why the Future of ML is Tiny and Bright with Prof. Vijay Janapa Reddi of Harvard University. Vijay's slides. Full Seminar Video.
- *October 1*: Software Tools for TinyML with Prof. Marcelo Rovai of Universidade Federal de Itajubá. Marcelo's Slides. Full Seminar Video. Chat Log.

TinyML academic network

https://tinymledu.org/teach

Course Name	Date of Course	Target Audience	Language of Instruction	Language of Materials	Course Website	Materials Link
edX tinyML Specialization	Launched 2020-2021	Everyone	English	English	link	link
Harvard CS249r	Sept-Dec 2020	Graduate Students	English	English	link	link
UNIFEI IESTI01-T01	Jan-July 2021	Undergraduate Students	Portuguese	English	link	link
UNIFEI IESTI01-T02	Aug-Dec 2021	Undergraduate Students	Portuguese	English	link	link
CRESTLEX 3.0	June 2021	Middle and High School Students and Teachers	English	English	link	link

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CRESTLEX 3.0	June 2021	Middle and High School Students and Teachers	English	English	link	link

CRESTLEX

CReating Effective STem Learning EXperiences
Summer 2021

Day	Date	Morning Session 9am–11am MT	Afternoon Session 12pm–2pm MT
1	Tuesday, 6/22	The Future of Artificial Intelligence	Experimenting with AI
2	Wednesday, 6/23	How Machine Learning Works	Exploring Machine Learning with Edge Impulse
3	Thursday, 6/24	How can I use ML in my Community?	*Build it!* Creating your own application with Edge Impulse
4	Friday, 6/25	Responsible AI	What's Next?

https://tinymledu.org/teach

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CRESTLEX 3.0	June 2021	Middle and High School Students and Teachers	English	English	link	link

Have **questions** about how to adapt the materials?
Suggestions for how to make them easier to use?
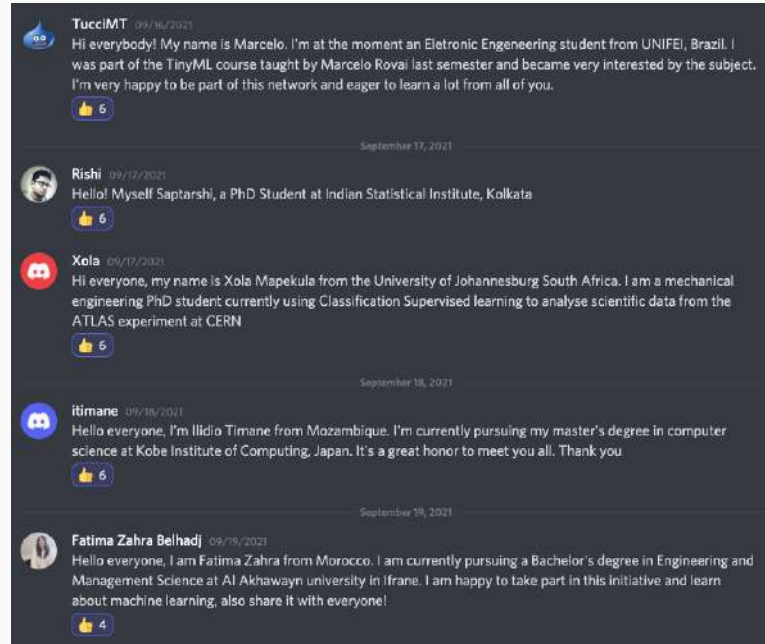**Reach out on Discord!**

Reliable equipment

Devices should be available from Arduino by the end of the year!
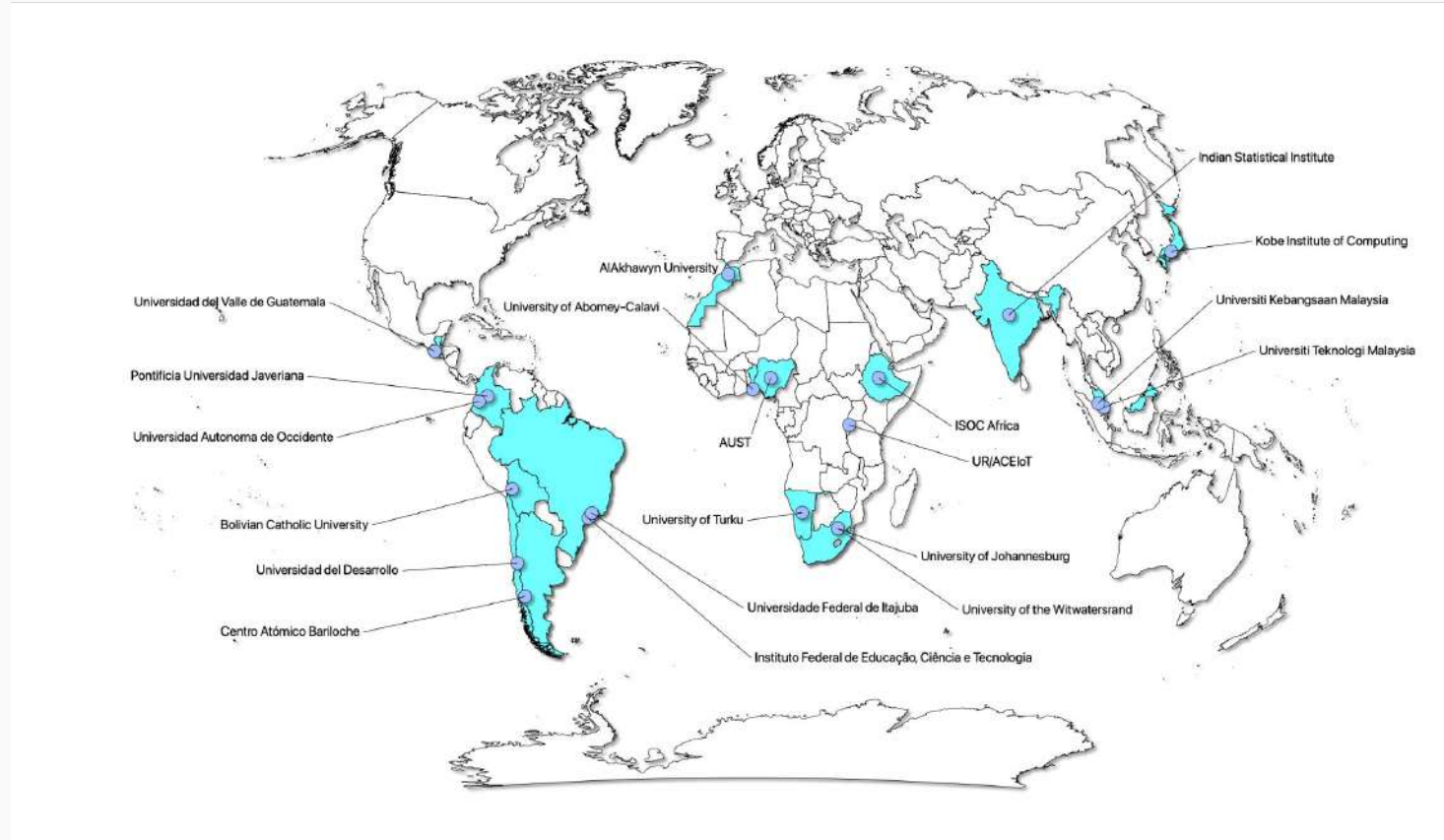
We are **#1** on the list!

Human Networking

160 members!

TinyML academic network

TinyML academic network

Americas:

Colombia
1- Pontificia Universidad Javeriana - Bogotá, Colombia
2- Universidad Autónoma de Occidente - Cali, Colombia

Argentina
3- Centro Atómico Bariloche /Instituto Balseiro

Brazil
4- UNIFEI - Universidade Federal de Itajubá
5- IFSP - Instituto Federal de São Paulo

Chile
6- UDD - Universidad del Desarrollo

Guatemala
7- Universidad del Valle de Guatemala

Bolivia
8- Universidad Católica Boliviana "San Pablo" Regional La Paz

TinyML academic network

Africa:
    Ethiopia
        9- Internet Society
    Benin
        10- University of Abomey-Calavi
    Rwanda
        11- University of Rwanda
    Namibia
        12- University of Turku in Namibia
    Nigeria
        13- African University of Science and Technology
    Morocco
        14- Al Akhawayn University in Ifrane
    South Africa
        15- University of Johannesburg
        16- University of Witwatersrand

TinyML academic network

Asia:

Malaysia
17- Universiti Kebangsaan Malaysia
18- Universiti Teknologi Malaysia

India
19- Indian Statistical Institute

Japan
20- Kobe Institute of Computing

Roadmap

Network Creation	Seminar #1 Intro to TinyML	Seminar #2 Tools Setup	Seminar #3 Networking
July 21	Sept 21	Oct 21	Oct 21

ICTP Workshop	Devices Setup	TinyML Labs	Regional Workshops
Oct 21	Dec 21 Jan 22	Jan 22	Mar 22

Case Studies

Case Studies

Coffee disease classification with ML
João Vitor Yukio Bordin Yamashita
joao.yamashita@unifei.edu.br

COVID-19: Detection by Cough

TINYML 4D – ACADEMIC NETWORK
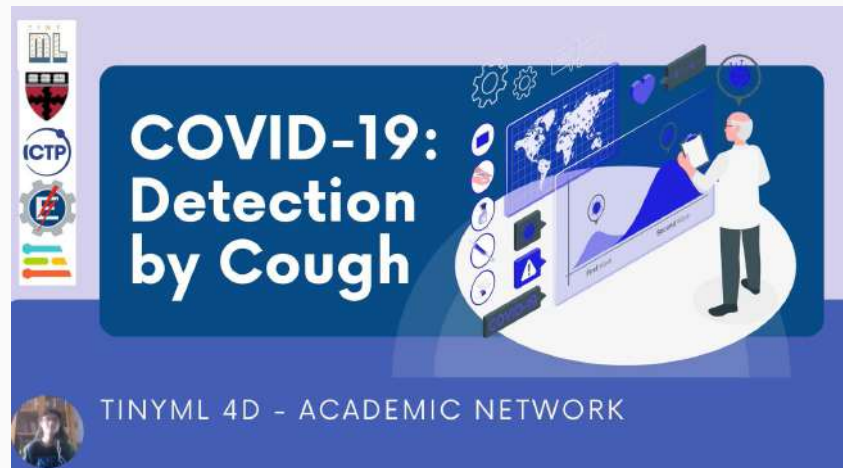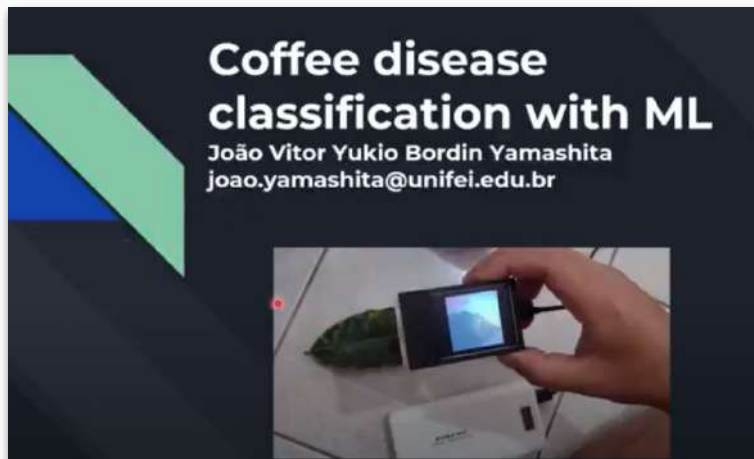
Breakout Rooms

Get to know each other!

Find common interests!
(teaching TinyML, applications, research, etc)

Create new channels in Discord!
(language, geography, interest, etc)!

Choose your own adventure!

Working Group

Vijay
Janapa Reddi

Brian
Plancher

Marco
Zennaro

Marcelo
Rovai

Hal
Speed

Daniel
D'souza

Gregg
Barrett

Andres
Monsalvo

Jesús
Alfonso
López Sotelo

Mohd
Ridzuan Bin
Ahmad

Jose Alberto
Ferreira Filho

**And many others!
And maybe you?**

Thanks!

Tell me and I forget, teach me and I may remember, involve me and I learn.
-- Benjamin Franklin