ITU Events

AI for Good

Accelerating the United Nations Sustainable Development Goals

ALL YEAR
ALWAYS **ON**LINE

aiforgood.itu.int

38 UN PARTNERS

AI for Good | ITU – Committed to connecting the world

193
MEMBER STATES

+900
PRIVATE SECTOR ORGANIZATIONS

+150
ACADEMIA MEMBERS

3
Sectors

ITU Radiocommunication (ITU-R)
Coordinating radio-frequency spectrum and assigning orbital slots for satellites

ITU Standardization (ITU-T)
Establishing global standards

ITU Development (ITU-D)
Bridging the digital divide

AI for Good

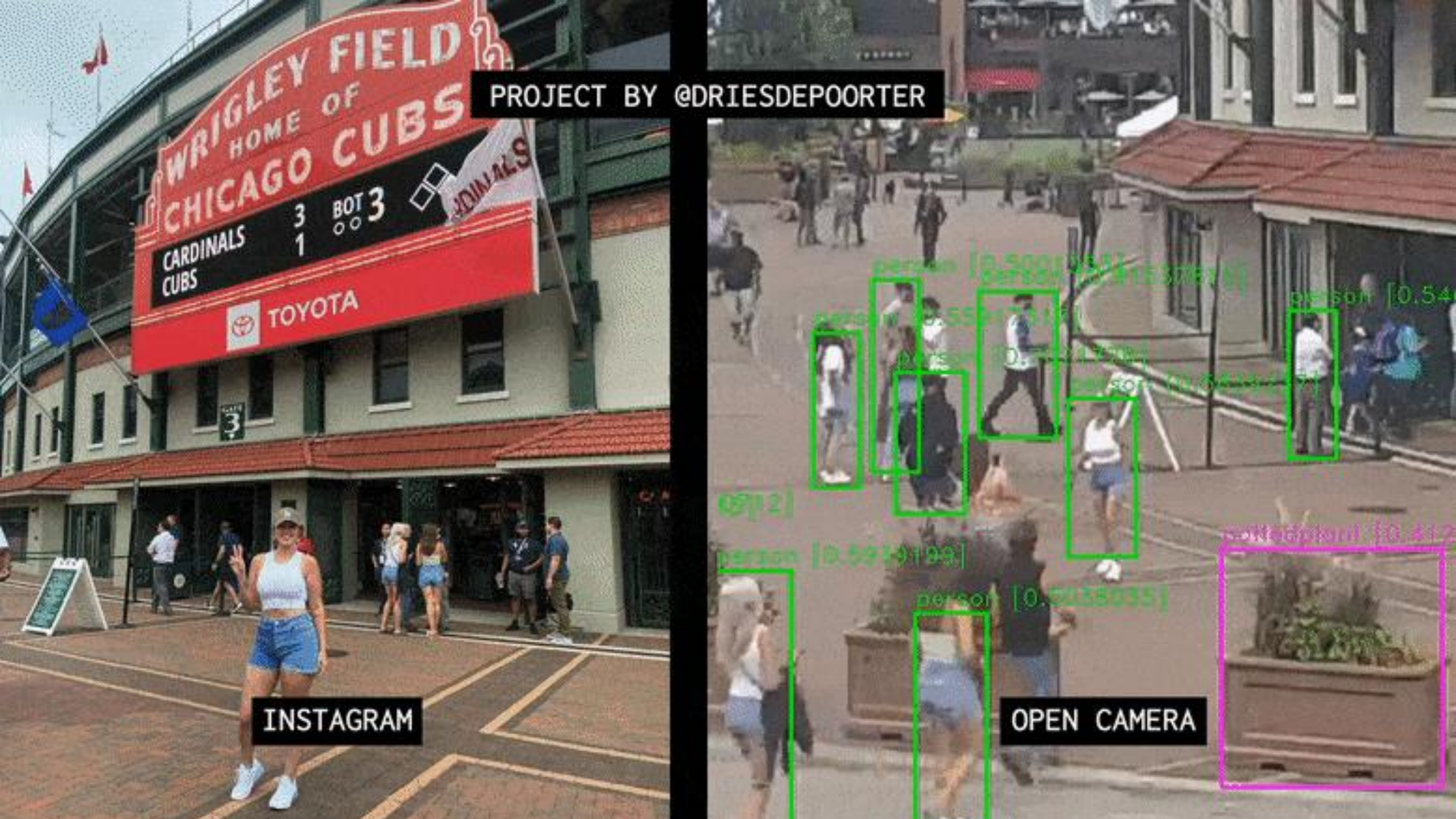
THE leading action-oriented, global & inclusive United Nations platform on AI

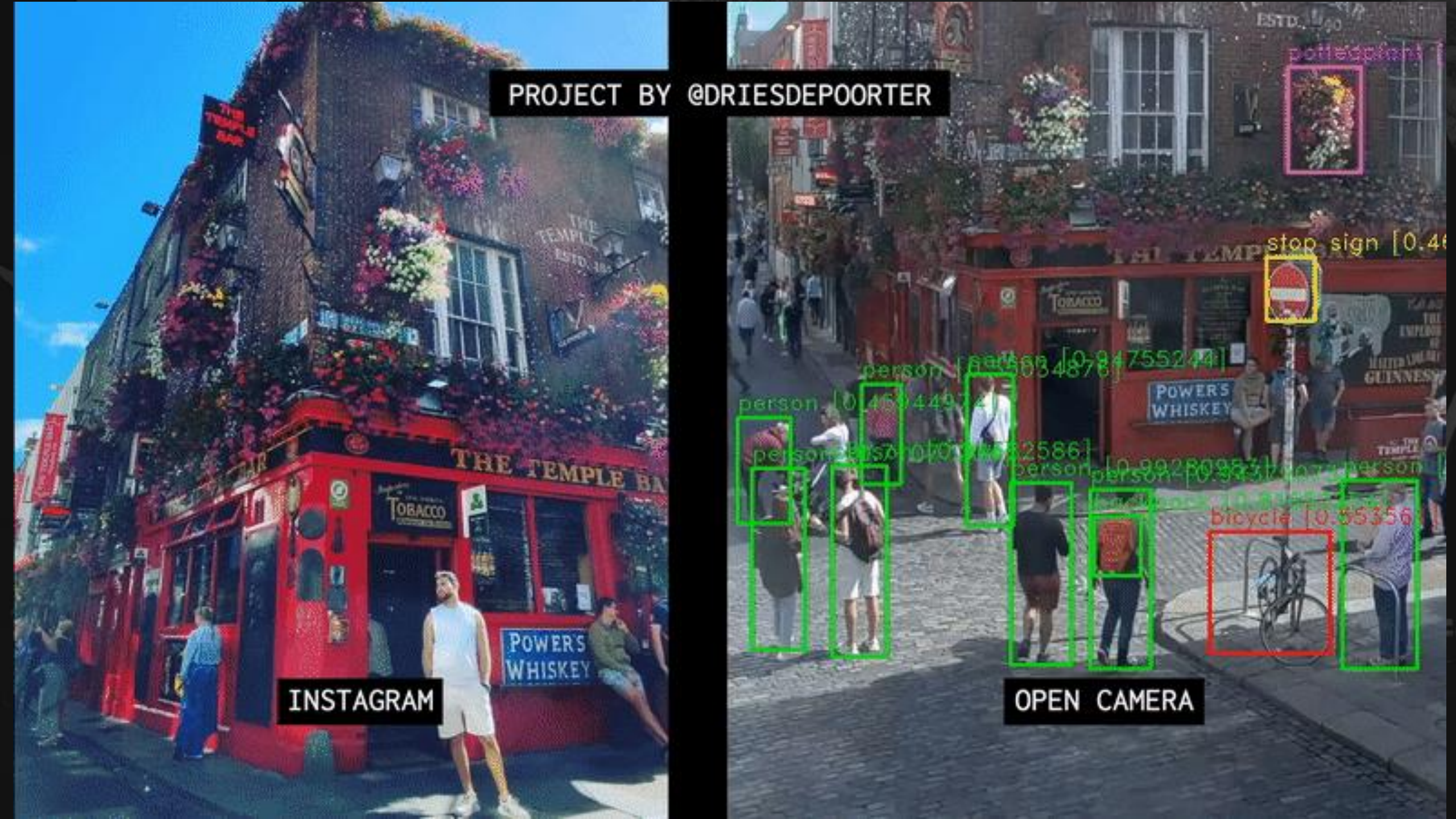
AII YEAR, ALWAYS ONLINE

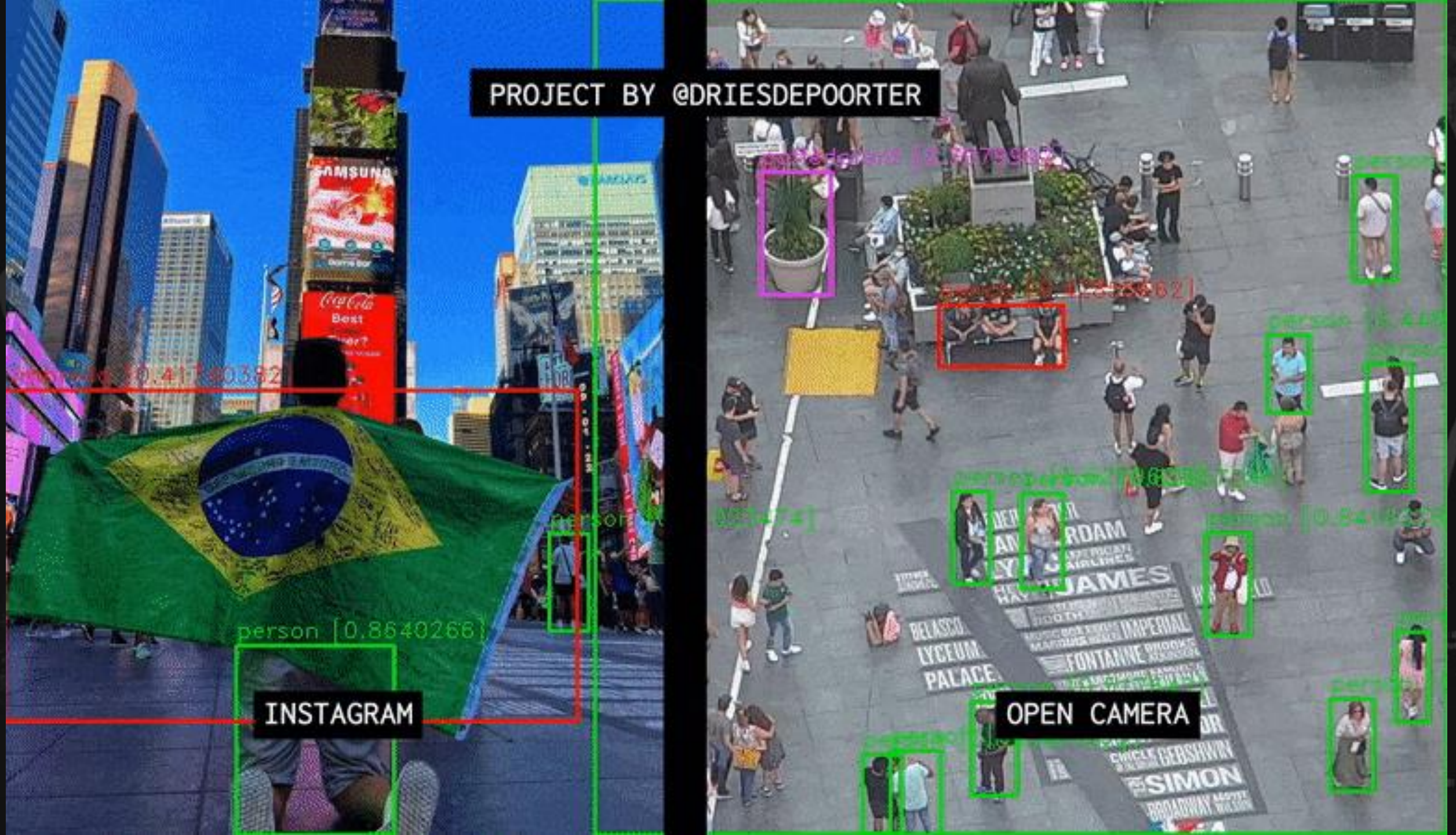
Organizer

40 UN Orgs

Co-convener


WRIGLEY FIELD
HOME OF
CHICAGO CUBS
CARDINALS 3
CUBS 1
BOT 3
TOYOTA
PROJECT BY @DRIESDEPOORTER
INSTAGRAM
OPEN CAMERA


PROJECT BY @DRIESDEPOORTER
INSTAGRAM
OPEN CAMERA
THE TEMPLE BA
TOBACCO
POWER'S WHISKEY
stop sign
person
bicycle


PROJECT BY @DRIESDEPOORTER
person 0.8540266
INSTAGRAM
OPEN CAMERA

AI can help solve humanity's greatest challenges

How do we know what problems to work on?

AI for Good

Accelerating UN SDGs

17 Goals and 169 targets creating the blueprint to achieve a more sustainable future for all by 2030

Adopted by all United Nations Member States

40 UN PARTNERS

ITU

AI for Good | The goal

Identify
Practical applications of AI

Scale
Solutions for global impact

Accelerate
Progress towards the UN SDGs

AI for Good | 40 UN Organizations

AI for Good | Multi-stakeholder

Interdisciplinary

Inter-generational

2020

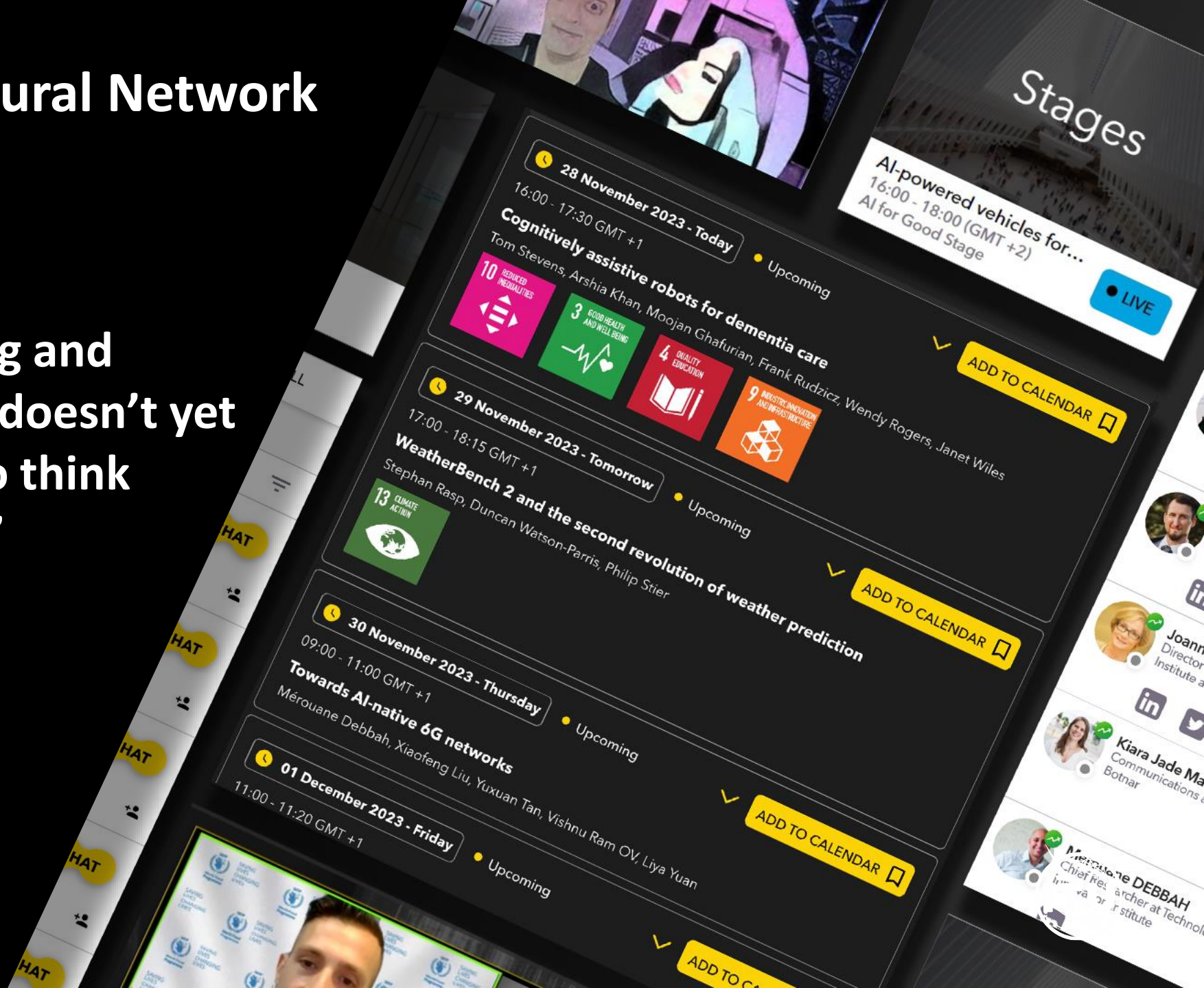
2021

2022

AI for Good | Neural Network

“This is a truly amazing and original platform that doesn’t yet exist. You may want to think about copyrighting it.”

Philippe Jegou - AWS,
UN Account Manager



AI for Good | Products

Learn

- AI for Good Keynotes
- AI for Good Webinars
- AI for Good Discovery
- AI for Good Perspectives
- AI for Good On the Go
- AI for Good Blog

Build

- AI for Good Innovation Factory
- AI for Good Machine Learning in 5G Challenge
- AI for Good GeoAI Challenge
- AI for Good tinyML Challenge
- AI for Good Breakthroughs
- AI: ITU Focus Groups

Connect

- AI for Good Global Summit
- AI for Good Neural Network
- AI for Good Artistic Intelligence
- AI for Good UN AI Actions
- AI for Good SDGs Gateway
- AI for Good Brain Trust

ITU

AI for Good

ITU-T standards community

Study Groups

Membership-driven Study Groups develop international standards.

Focus Groups

Open to all interested parties, Focus Groups define new directions in ITU standardization.

Workshops and symposia

Open-to-all events analyze emerging trends and encourage peer-learning

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

How we work

SG2 - Operational aspects

SG3 - Economic & policy issues

SG5 - Environment, EMF & circular economy

SG9 - Broadband cable & TV

SG11 - Protocols, testing & combating counterfeiting

SG12 - Performance, QoS & QoE

SG15 - Transport, access & home

SG16 - Multimedia & digital technologies

SG17 - Security

SG20 - IoT, smart cities & communities

40 UN PARTNERS

aiforgood.itu.int

AI for Good

ITU standardization: Technical foundations

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

Study Groups

AI and ML standards/Recommendations

- ITU-T SG13
- ITU-T SG16
- ITU-T SG5
- ITU-T SG12
- ITU-T SG9
- ITU-T SG20
- ITU-T SG17

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

Network orchestration and management – ML5G toolkit

- Companies in the networking business are introducing AI/ ML as part of their innovations to optimize network operations and increase energy and cost efficiency.
- ITU standards for AI/ML provide a toolkit for AI/ML integration in 5G and future networks as AI/ML capabilities and networks evolve.

aiforgood.itu.int

AI for Good

The toolkit

- Y.3172 architecture
- Y.3173 intelligence evaluation
- Y.3174 data handling
- Y.3176 ML marketplace integration
- Y.3179 ML model serving
- Y.3181 ML sandboxes

These standards are based on the pre-standardization work undertaken by our Focus Group on machine learning for 5G and future networks.

aiforgood.itu.int

AI for Good

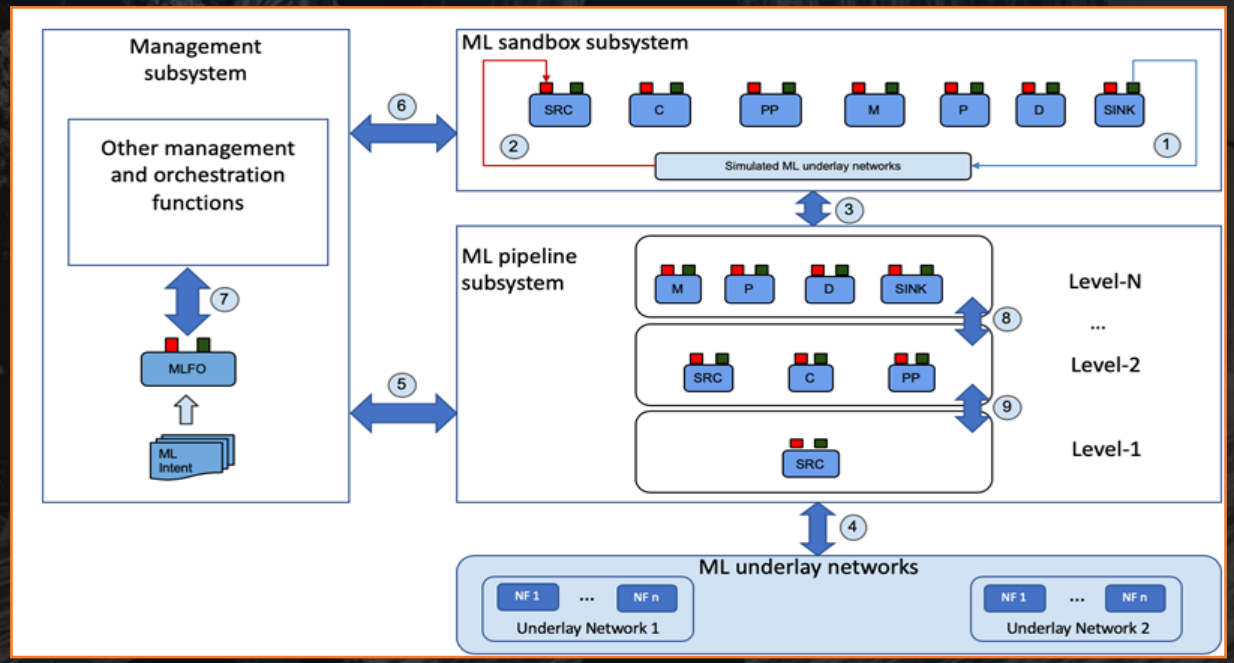
Case study-1: ML5G standards (the output)

[2018-2020]

- An open, collaborative study, driven by contributions from around the world
- Analysed more than 30 use cases
- Requirements classified as "critical", "expected", "added value".
- Architecture Framework provides a common language for managed ML in networks

A study of use cases for ML in 5G

ITU-T Y.3172



ITU-T Y.3172, "Architectural framework for machine learning in future networks including IMT-2020"

aiforgood.itu.int

40 UN PARTNERS

ITU

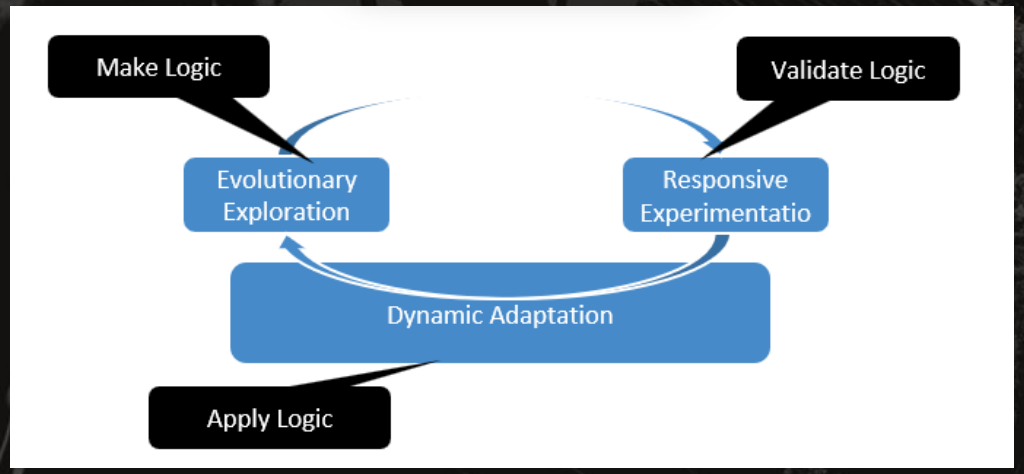
AI for Good

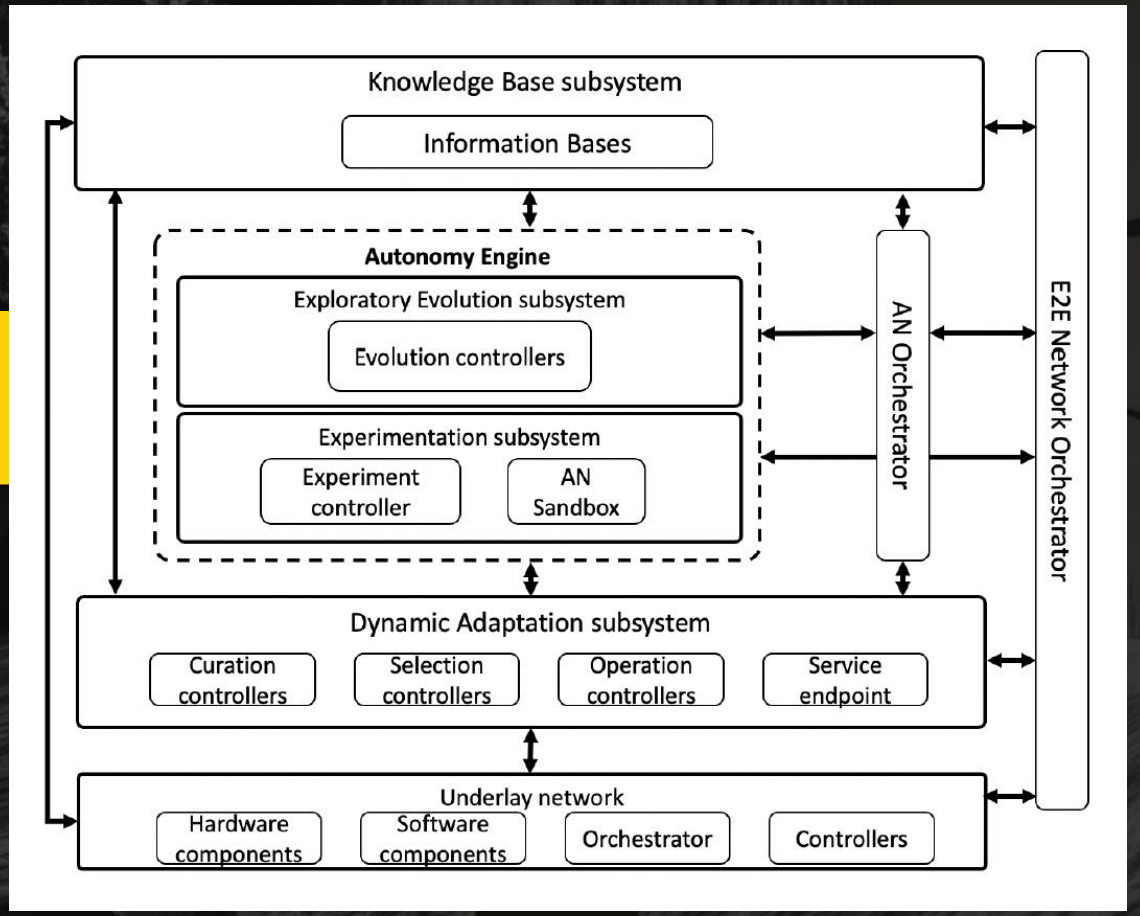
Autonomy & AI Native (the output)

Studied use cases for AN

Architecture framework for AN

Build-a-thon Proof of Concept





aiforgood.itu.int

Build-a-thon PoC is a coding competition with **100+ participants since 2020**

40 UN PARTNERS

ITU

AI for Good

Multimedia

Our standardization expert group for multimedia, ITU-T Study Group 16, includes a working group dedicated to “AI-enabled multimedia applications” (Q5/16).

- 13 standards approved
- 54 new standards currently under development

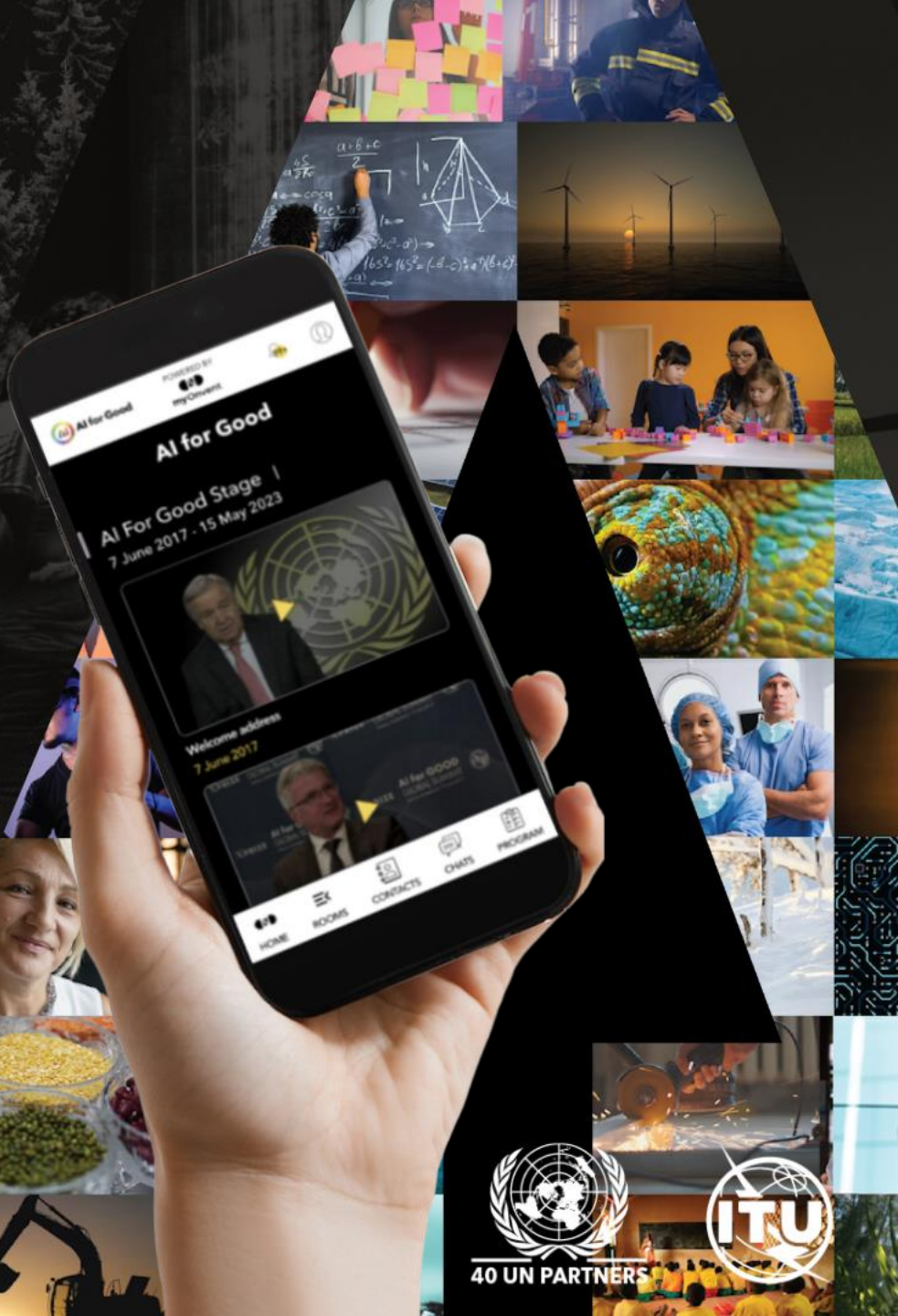
aiforgood.itu.int

AI for Good

Service quality assessment

AI/ML is widely used in developing models to assess the quality of speech, audio and video, for example in ITU standards for the quality assessment of audiovisual streaming, in particular:

- Progressive-download and adaptive-bitrate AV (P.1203)
- Video streaming services up to 4K (P.1204)



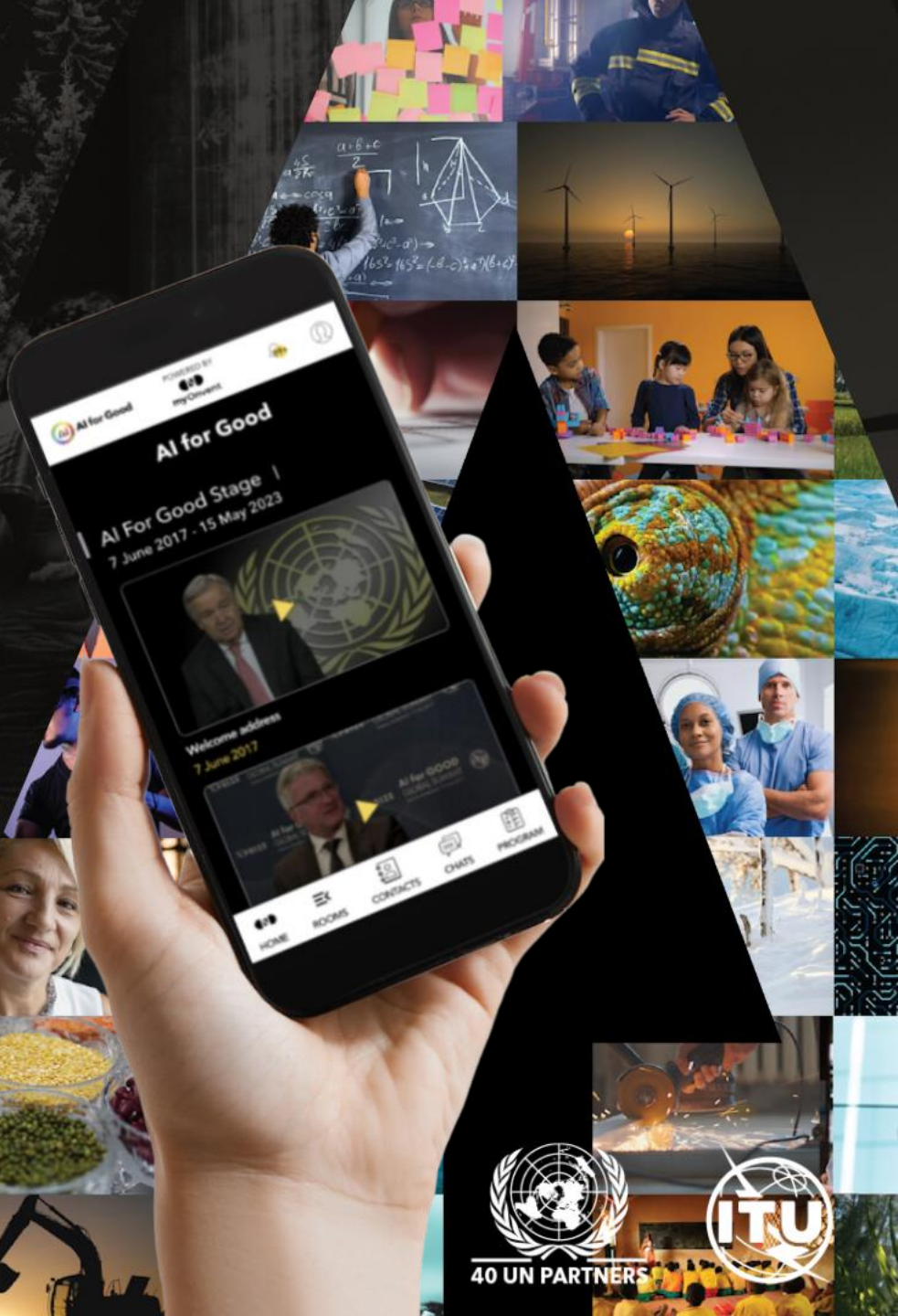
aiforgood.itu.int

AI for Good

Service quality assessment

ITU standards also address:

- Intelligent network analytics and diagnostics (E.475)
- Creation and performance testing of ML-based models to assess the impact of the transmission network on speech quality for 4G voice services (P.565).



aiforgood.itu.int

AI for Good

Service quality assessment

The lessons learnt developing ITU P.1203, P.1204, E.475 and P.565 have informed the development of an ITU standard and supplement:

- Guidance for the development of machine-learning-based solutions for QoS/QoE prediction and network performance management in telecommunication scenarios (P.1402)
- Considerations for the development of new QoS/QoE-related objective models to be embedded in standards prepared by ITU-T Study Group 12 (P.Sup28).

aiforgood.itu.int

AI for Good

Energy efficiency

An ITU standard specifies a data centre infrastructure management (DCIM) system based on big data and AI technology (ITU L.1305), supporting DCIM systems in reducing the energy required to control data centre temperature.

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

An ITU standard provides the framework for a premium cable network platform to support industry in offering advanced multimedia services (ITU J.1600).

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

Cable networks

In addition to J.1600, this new series of ITU standards on AI assisted cable networks includes:

- Functional requirements for a smart home gateway (J.1611)
- Architecture for a smart home gateway (J.1612)
- Functional requirements of E2E network platforms to enhance the delivery of cloud-VR services over integrated broadband cable networks (J.1631)

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good

AI is one of the five characteristics of a new ITU framework to support smart service operation, network management and infrastructure maintenance (M.3041).

40 UN PARTNERS

aiforgood.itu.int

AI for Good

New ITU standards in this domain address:

- AI enhanced telecom operation and management (M.3080)
- Energy saving for 5G Radio Access Networks with AI (M.3381)
- Work order processing (M.3382) and log analysis in telecom management with AI (M.3382)
- Intelligence levels (M.3384) and their evaluation (M.3385) in Ai enhanced telecom operation and management
- Robot-based smart patrols of telecoms networks (M.3367)

aiforgood.itu.int

AI for Good | ITU AI Related Focus Groups & Initiatives

Working together vs. in silos to solve issues in AI

Building blocks to need to be solved to achieve AI for scale for all

- Data sharing
- Ethics and bias
- Best practices
- Safety and security
- Measurement, benchmarking
- Gap analysis and landscape

AI for Good | AI-RELATED FOCUS GROUPS & INITIATIVES

AI for Health
ITU-WHO Focus Group
World Health Organization

AI and Internet of Things for Digital Agriculture
ITU Focus Group
FAO

AI for Natural Disaster Management
ITU Focus Group
WORLD METEOROLOGICAL ORGANIZATION + UN environment programme

Machine Learning and 5G
ITU Focus Group

AI for Environmental Efficiency
ITU Focus Group

AI and Data Commons
Global Initiative

AI for Road Safety
Global Initiative

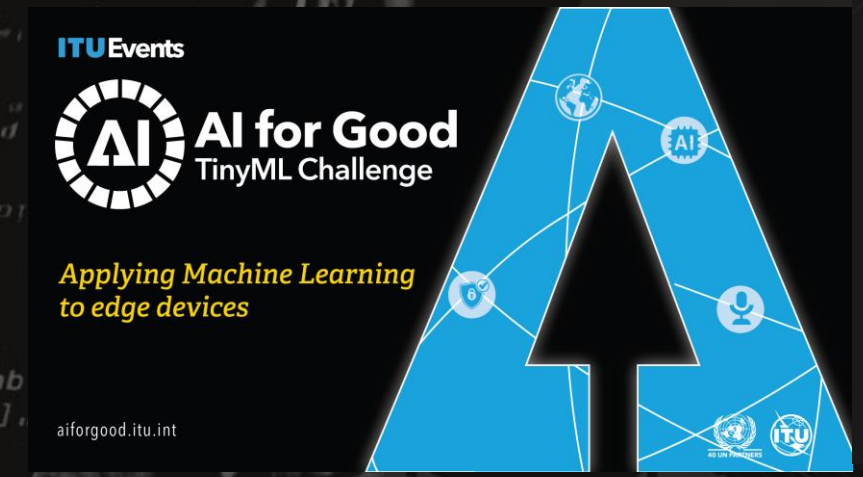
=

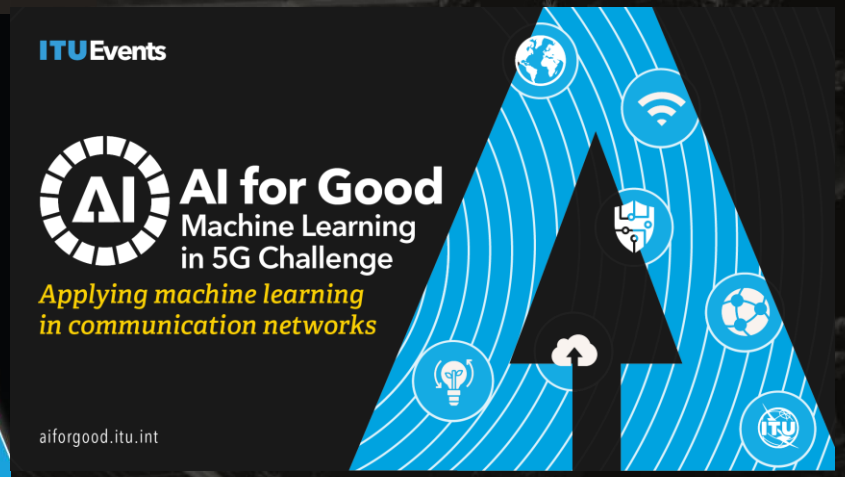
AI for Autonomous and Assisted Driving
ITU Focus Group

+ UN Special Envoy for Road Safety + UN Envoy on Technology

ITU

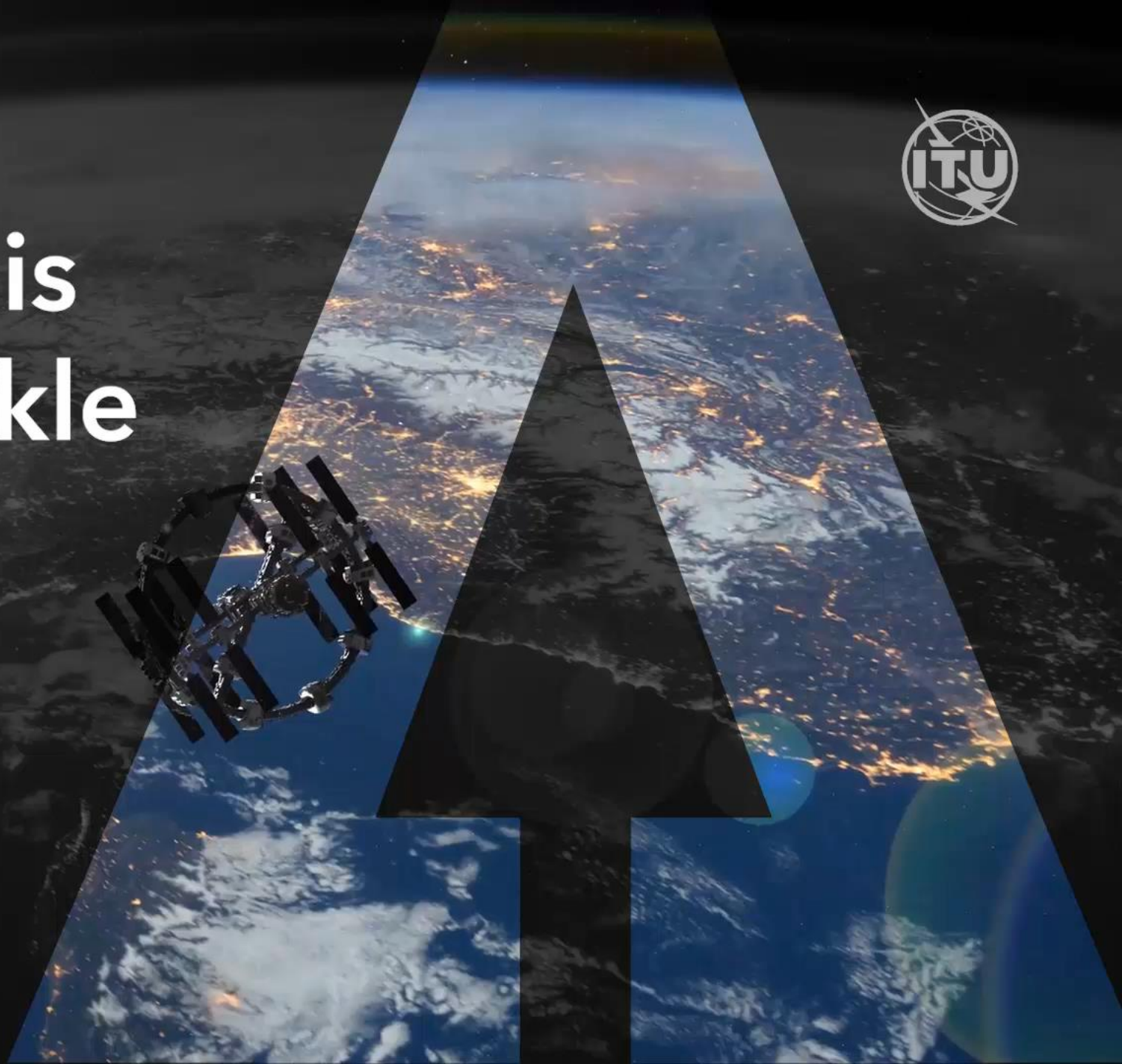
AI for Good ITU AI/ML Challenges



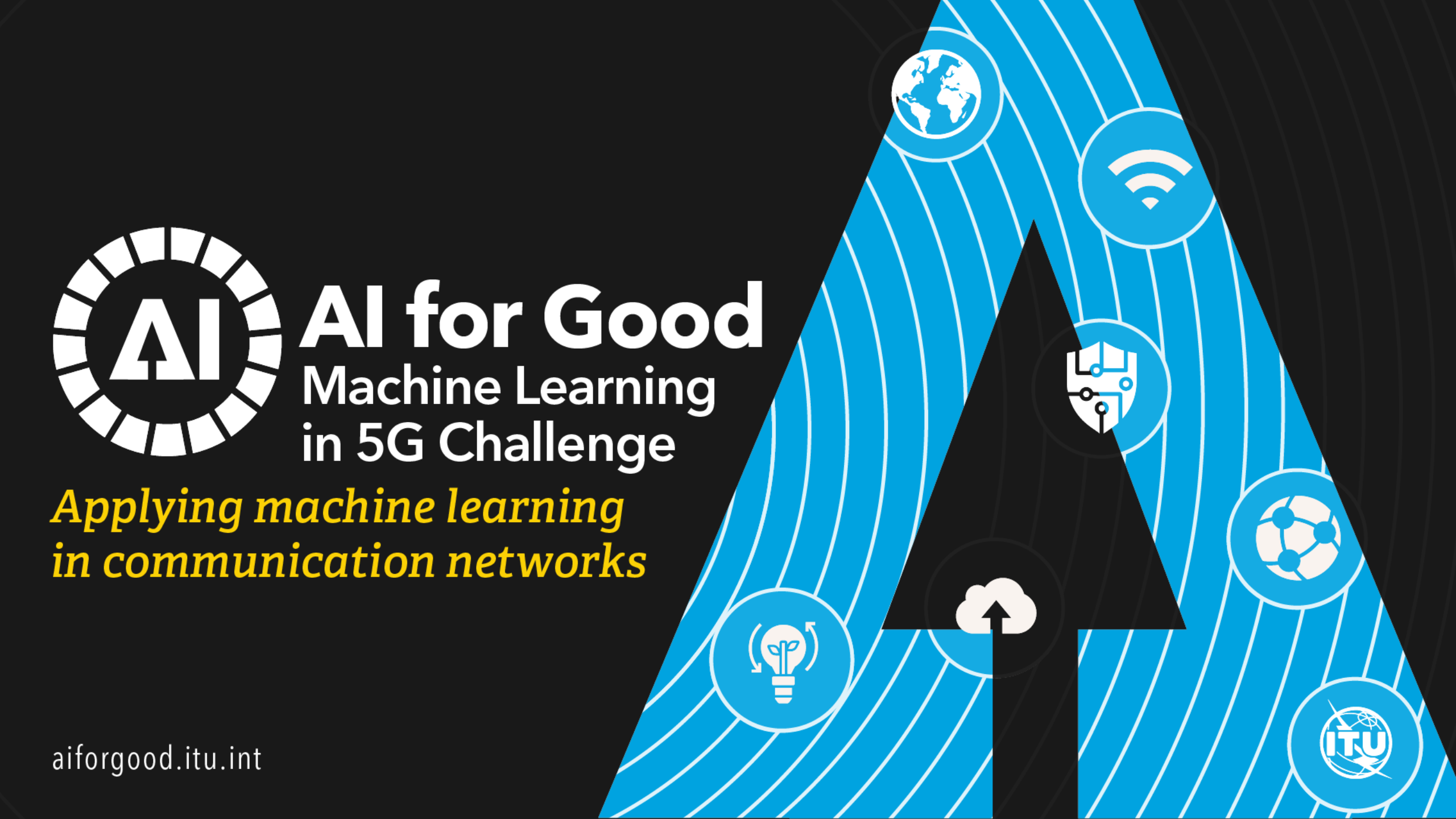


40 UN PARTNERS

Geospatial AI is helping to tackle the world's greatest challenges



aiforgood.itu.int


AI
AI for Good
Machine Learning
in 5G Challenge
Applying machine learning
in communication networks
aiforgood.itu.int
ITU

AI for Good

5G Energy consumption modelling challenge

2023Q1 Data Collection

- ✓ From 200 base stations for over 2 months

2023Q2 Problem Proposal

- ✓ Finalize problem statement
- ✓ Data desensitization

2023Q3 Competition

- ✓ Online submission with real-time updated leaderboard

2023Q4 Assessment

- ✓ Presentation at webinar
- ✓ Technical report and code

776 Teams Enrolled

83 Countries

245 Teams Submitted

8,081 Submissions

Leaderboard

RANK	USER	PUBLIC SCORE	PRIVATE SCORE
1	Farzi_Data_Scientists Team	0.043406757	0.06327
2	CAKE Team	0.064045963	0.064738199
3	rafael_zimmermann	0.0690203	0.069932182
4	LROUZZ Ecole polytechnique de tunisie	0.071636682	0.070974957
5	Obelisk	0.074361821	0.073240751
6	Firas Team	0.074454244	0.07421664

HKT ITU ZiNDi HUAWEI

aiforgood.itu.int

40 UN PARTNERS

ITU

AI for Good ITU Journal

ITU Journal
Future and evolving technologies

FREE I FAST I FOR ALL

4th special issue

AI and machine learning solutions in 5G and future networks

ITU Journal
Future and evolving technologies

FREE I FAST I FOR ALL

Special issue

Geospatial AI to advance the United Nations Sustainable Development Goals

aiforgood.itu.int

40 UN PARTNERS

ITU Events
AI for Good
Global Summit
Accelerating the United Nations
Sustainable Development Goals
30-31 May 2024
Geneva, Switzerland
aiforgood.itu.int/
40 UN PARTNERS
ITU

AI for Good | Early-confirmed Speakers 2024

Doreen Bogdan-Martin
Secretary-General
International Telecommunication Union (ITU)

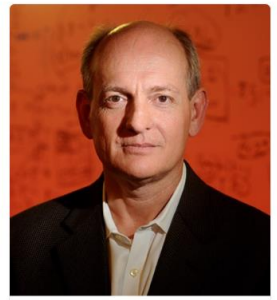
Geoffrey Hinton
Advisor for the Learning in Machines & Brains
Canadian Institute for Advanced Research
Turing Award Recipient
*remote

Abeba Birhane
Senior Fellow in Trustworthy AI, Time 100 AI
Mozilla Foundation

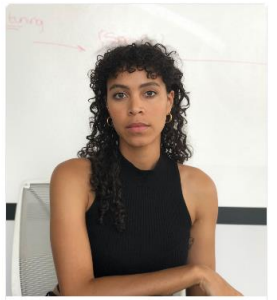
Sam Altman
CEO
OpenAI
*remote

Daron Acemoglu
Institute Professor
Massachusetts Institute of Technology (MIT)
New York Times bestseller of 'Why Nations Fail: Power, Prosperity, and Poverty'

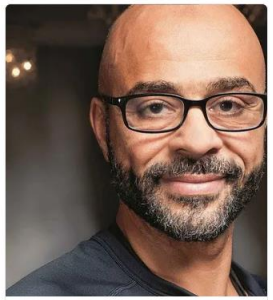
HRH Princess Beatrice
United Kingdom



Stuart Russell
Professor of Computer Science at University of California, Berkeley, Author 'Human Compatible: Artificial Intelligence and the Problem of Control'
UC-Berkeley



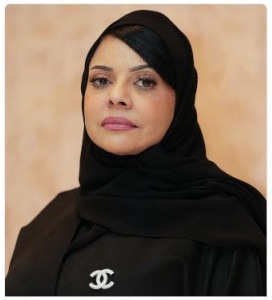
Pelonomi Moiloa
CEO, Time 100 AI
Lelapa AI



Mo Gawdat
Former Chief Business Officer
Google X
Bestselling author of 'Scary Smart' and 'Solve for Happy'

Gary Marcus
Scientist, best-selling author, and serial entrepreneur
New York University (NYU)

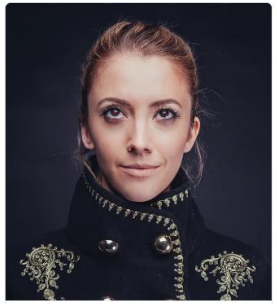
Chieko Asakawa
IBM Fellow
IBM



Fatmah Baothman
CEO
Alothaim Investment AI and R&D Company

Nicholas Thompson
CEO
The Atlantic

Jim Zemlin
Executive Director
Linux Foundation

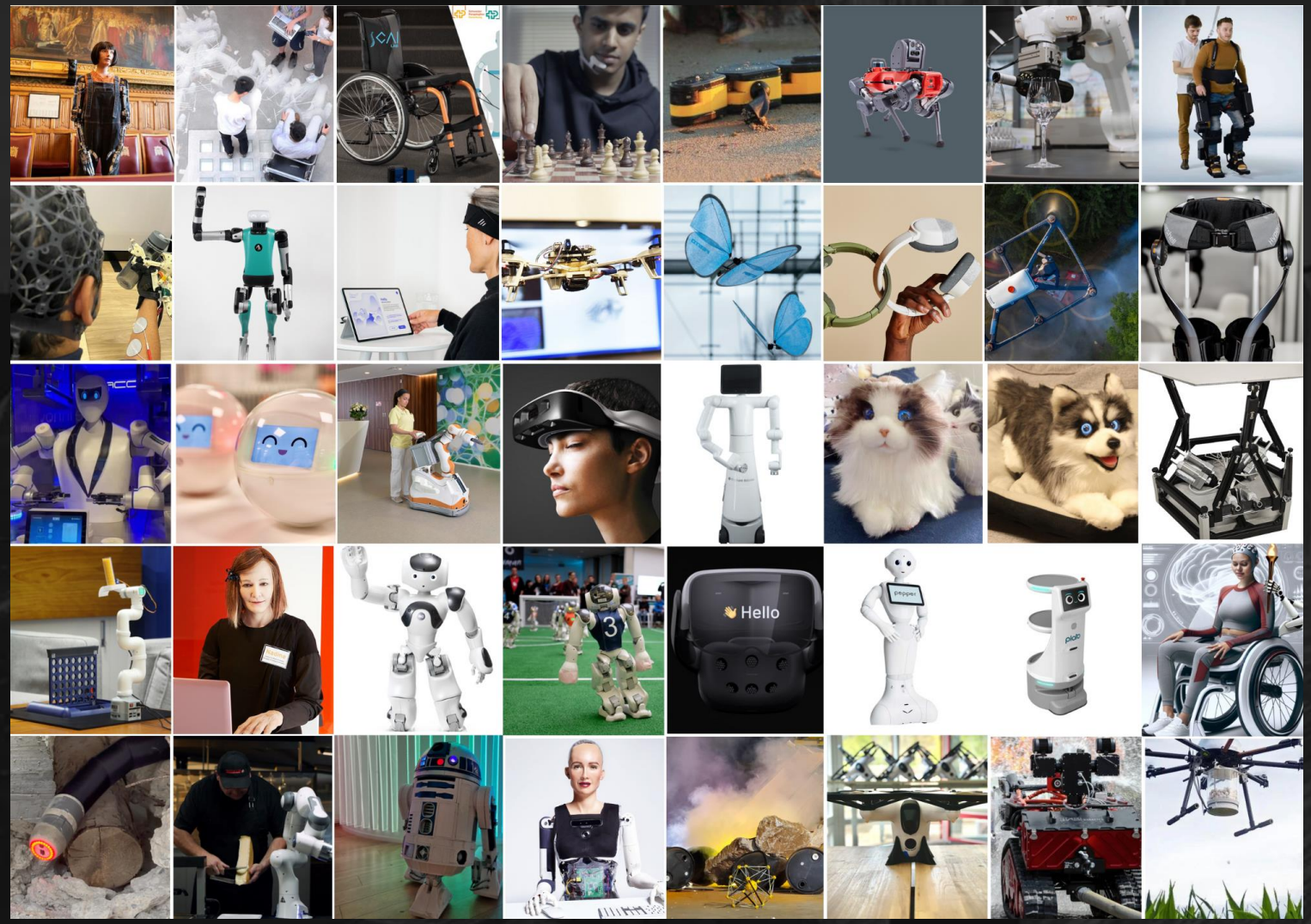


Taryn Southern
Award-winning artist, storyteller and strategist

Hao Li
CEO & Co-Founder & Associate Professor (MBZUAI)
Pinscreen

AI for Good

| Exhibits & Demos



40+ demos and exhibits confirmed

20+ presentations at the Frontier AI Stage

Mix of **BMI**, **Drones**, **Robotics**, **VR/AR**, and **Arts**

ITU

AI for Good | Our platform at your service…

Attend

Join weekly sessions and learn; something for everyone on all SDGs

Programming

Join existing panels or propose new jointly curated sessions

Network

Find experts, partners, collaborators inside and outside the UN

Collaborate

Join Focus groups, challenges, initiatives to work on building blocks of AI for Good

Be visible

Leverage Neural Network to share AI activities

Innovate

Use platform to propose new activities, initiatives, pitching sessions & challenges

AI for Good | Links

AI for Good Website

https://aiforgood.itu.int/

AI for Good Global Summit 2023
https://aiforgood.itu.int/summit23/

AI for Good Neural Network

https://aiforgood.itu.int/neural-network/

AI for Good Media Kit

https://trello.com/b/Z9W21ZIA/ai-for-good-digital-media-toolkit

ai@itu.int

@AIforGood

AIforGood

@AIforGood

@AIforGood