

www.ai4eu.eu

EU Al ondemand **Platform** and András Lukacs



lukacs@cs.elte.hu

Eötvös Loránd University

Institute of Mathematics

Artificial Intelligence in Horizon 2020 and Beyond Budapest, 2 July 2019



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825619

EU investments in Al



Beyond 2020:

Increasing investments to €20 billion / year (PUB & PRIV)

Ambitions of AI4EU

• Mobilizing the entire **European AI community**

Make AI promises real for the EU Society and Economy

- Create a leading **AI European ecosystem**
- Support by an on-demand platform
- Generate market impacts and EU economic growth

Mission

Vision

- Build a sustainable **Open AI On-Demand-Platform** to make expertise, knowledge, algorithms and tools available to all users from all sectors
- Fill important technology gaps
- Reinforce European excellence and leading position in AI research and application domains
- Draw a Strategic Agenda for European Al Research

AI4EU outline

AI4EU is a collaborative H2020 Project that aims to

- Mobilize the entire European Al community to make AI promises real for the European Society and Economy
- Create a leading **collaborative AI European Platform** to nurture economic growth.

Key figures

- **79 members** (60 leading research institutes)
- 21 partnering countries
- €3m Cascade Funding

Fed by 8 pilots experiments

• Citizen, Robotics, Industry, Healthcare, Media, Agriculture, IoT, Cybersecurity

3 open calls for Start-up, SMEs and AI talent and an ambitious technology transfer program



Explainable Physical HUMAN-CENTERED AI Integrative Collaborative

Ethical Observatory

Strategic Research and Innovation agenda

Based on 5 Research Areas

Consortium members





79 members – 21 countries



A balanced consortium of research and industry



WPs in glance





Innovation and research activities



Five research areas Explainable Physical Verifiable **HUMAN-CENTERED** ΑΙ Integrative Collaborative

Eight pilots experim

Pilot experiments	Description	Research areas
P1 AI4 Citizens	An Al-powered advisor for EU Citizen (focus on higner education)	Collab. Al, Explain Al
P2 AI4 Robotics	Intelligent performance Analytics for industrial robots	Verif. AI, Explain. AI
P3 AI4 Industry	AI-Driven digital Companion for production facility	Hybrid Al, Verif. Al
P4 AI4 Healthcare	Fostering confidence by estimating model uncertainty	Explain. AI, Physical AI
P5 AI4 Media	Al-based 3D-generation of animated video	Collab. Al
P6 AI4 Agriculture	Crop quality assessment throught computer vision	Hybrid Al, Explain Al
P7 AI4 IoT	Advanced analytics on air quality monitoring	Physical AI
P8 AI4 Cybersecurity	Al-driven attacks learner	Hybrid AI, Explain. AI, Collab. AI, Verif. AI

Coupled with an ambitious Technology Transfer Program (3 open call foreseen, major Ecosystem Development)

Ethical Observatory to tackle Ethical, Legal, Socio-Economical & Cultural issues

- To stimulate reflection, discussion and due consideration of ELSEC-AI issues within the EU AI community (researchers, educators and practitioners) and with the European Parliament, member states, and AI industry.
- **To provide resources** to educate the general EU public more accurately about state of the art in AI.
- **To survey legal issues** for the deployment of AI systems in the EU and identify sources of expertise for industries applying AI.
- To identify/elicit and monitor values and societal acceptance of decisions and policies.
- **To develop methodological guidelines** for the integration of ELSEC considerations in the design and development of AI systems.
- * **To avoid negative bias,** such as on gender or other forms of discrimination, which implicitly play a role in AI decision systems.

AI4EU: one-stop-shop platform

AI providers

- Researchers
- Techno providers

Other users

- Policy makers
- Students
- Entrepreneurs



Direct users

- SMEs
- Multiple domains companies
- Large industry
- ICT people (non Al)
 Communities
- Big Data
- Robotics
- IoT
- Security

Outline of platform services





AI4EU Platform: easy to use & ready for implementation and testing AI tools



AJAEU

AI4EU community



Linking AI4EU and European national initiatives

- AI4EU will create a network across European member states.
- National nodes for the AI4EU community based around academic and industry contact points

AI4EU Events

- Bring all stakeholders together around specific themes (Healthcare &AI, Industry 4.0&AI, Environment&AI, IoT&AI...) by organising nine local community events in nine different countries.
- Events in 2019
 - Paris, April 18th (Palais de Tokyo)
 - ✓ Athens, TBC (Technopolis)
- There will be six events in 2020-2021: a call for applications to consortium members will be set up to select the six cities that will host these events.

Country	NCP Representative	Partner Acronym
Austria	Dr Roman KERN	KNO
Belgium	Dr Tom LENAERTS	VUB
Czech Republic	Dr Marek HAVRDA	AGI
Finland	Dr Roope RITVOS	FVI
France	Dr Jerome KODJABACHIAN	THA
Germany	Dr Joachim KOEHLER	FHG
Greece	Dr Costas D. SPYROPOYLOS	DEM
Hungary	Dr Németh GEZA	BME
Ireland	Dr Barry O'SULLIVAN	UCC
Italy	Dr Amedeo CESTA	CNR
Latvia*	Dr Aivars BERZINS	TIL
Netherlands	Dr Milan PETKOVIC	PHI
Norway	Dr Ieva MARTINKENAITE	TEL
Poland	Dr Xavier CHAO	FBA
Portugal	Dr Joao Paulo COSTEIRA	ISTR
Slovakia	Dr Marek BUDZEL	ТИК
Slovenia	Dr Spela STRES	JSI
Spain	Dr Javier VAZQUEZ	UPC
Sweden	Dr Alessandro SAFFIOTTI	ORU
Switzerland	Dr Hervé BOURLARD	IDI
United Kingdom	Dr Antony COHN	LDS

* acting initially for, Latvia, Estonia and Lithuania

Timeline





Hungary (BME and ELTE) in AI4EU

WP7 Filling AI technology gaps

- Research on models and algorithms with a special focus on machine learning, deep learning
- Set up a focus group on mathematical tools of recent Al techniques → Strategic Research Map

Task 4.2 Establishment of the European AI4EU Association

- European AI4EU Association to be established
- Network of National Contact Points
- Organize Hungarian and neighbouring AI4EU community



www.ai4eu.eu

Questions? Thank you!

Artificial Intelligence in Horizon 2020 and Beyond Budapest, 2 July 2019



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825619

