



ARTIFICIAL INTELLIGENCE REGULATION

Dr. Christian M. Stracke

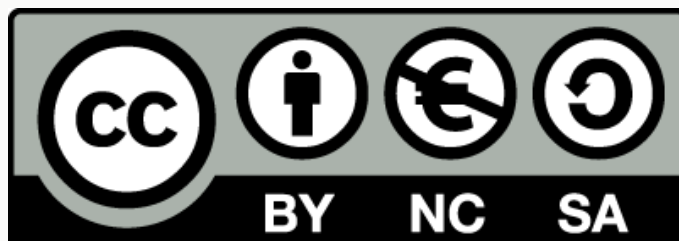
University of Excellence Bonn, Germany

Invited Speech at EUNIS Conference 2024

4th of June 2024 in Athens, Greece

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About me



Coordinator Virtual Collaboration & Cloud, University of Bonn



Adjunct Professor, Korean National Open University



Advisory Professor, East China Normal University



Founder & Director, European Research Institute eLC



100+ research projects with 55+ Mio. € budgets



170+ scientific publications incl. 90+ peer-reviewed / SSCI



Creative design & training for 15,000 teachers & 5,000 schools



Elected Chair of ISO & CEN Standardization Committees

International crises



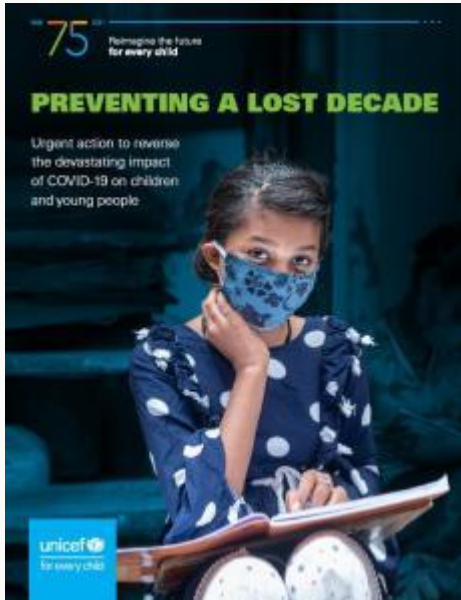
Crisis? What Crisis?

https://en.wikipedia.org/wiki/File:Supertramp_-_Crisis.jpg

Economic crisis (Hayes, profit only)
Education crisis (innovations, quality)
Media crisis (literacy, fake news)
Societal crisis (ethics, egoism)

We need innovative and high quality
Open Education for all as human right

Current challenges



New Normal?

<https://www.unicef.org/reports/unicef-75-preventing-a-lost-decade>

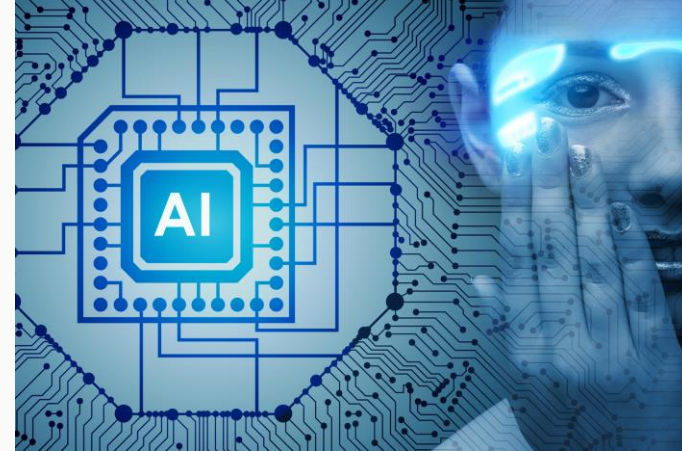
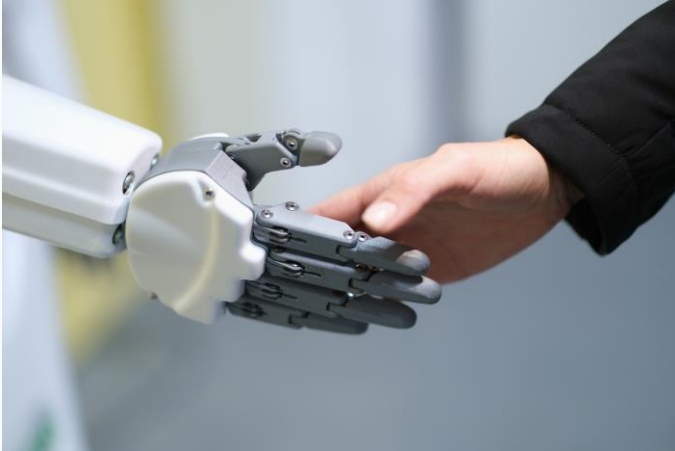
COVID-19 pandemic & lockdowns

War in Ukraine & many countries

Climate change, poverty, hunger

**We need innovative and high quality
Open Education for all as human right**

What is AI?



**Strong AI vs. Weak AI
Intelligence vs. Automatisatation**

**Data-driven AI vs. Knowledge-based AI
Hybrid AI - but always: Human to human**

Special case of education

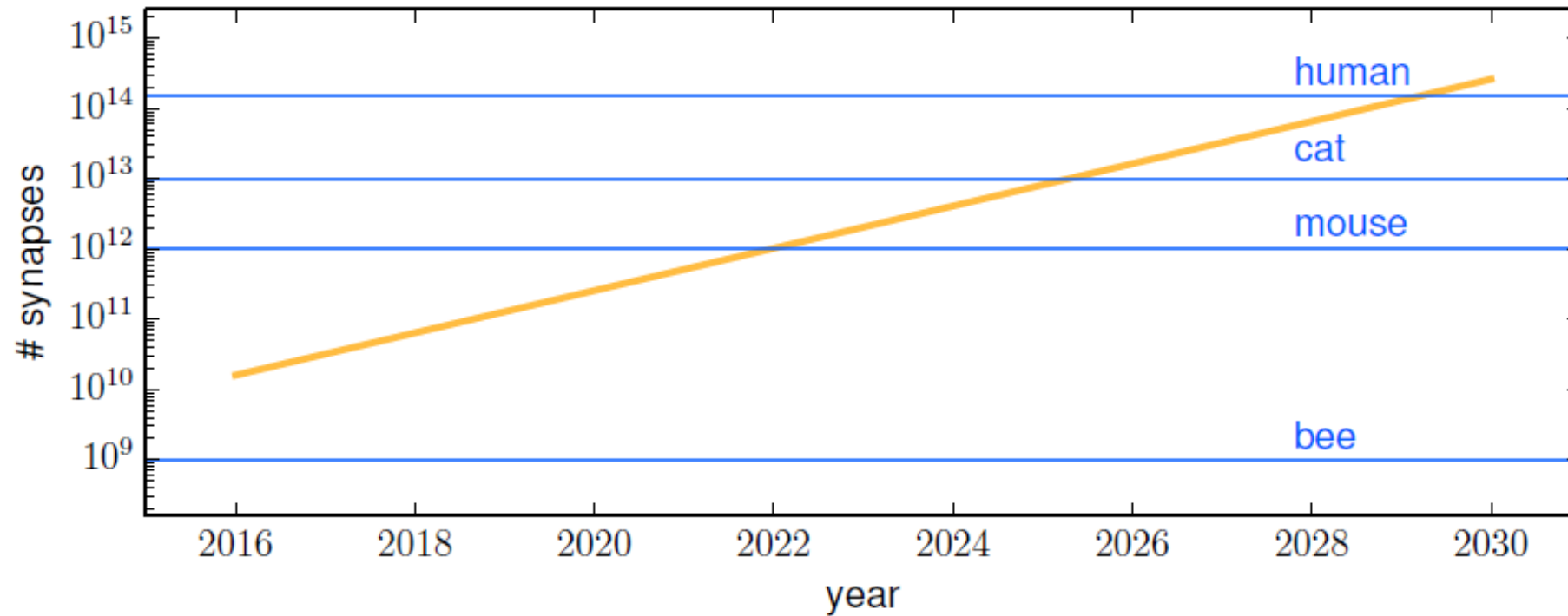


Education as human right
SDG 4: Education for all

Mandatory school visit
Learning cannot be forced

Photos: <https://www.pixabay.com> (345950) <https://www.pexels.com> (207691)

Time pressure



Graphic: Christian Bauckhage (University of Bonn)

AI regulation

Human rights, democracy, rule of law
Commercial monopolism

Ethical use of AI

<https://doi.org/10.5281/zenodo.10995669>

<https://doi.org/10.37074/jalt.2023.6.2.38>

Educational AI scenarios

<https://doi.org/10.37074/jalt.2023.6.2.33>

www.asianjde.com/ojs/index.php/AsianJDE/article/view/709/394

Netzwerk "Ethische Nutzung von KI" - www.ethischeki.competence.eu



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How can I use AI ethically at university?

This guideline of the German Network "Ethische Nutzung von KI" (Ethical Use of AI) is intended as initial information for university teachers who have not yet worked with AI. It consists of basic statements on the use of AI and the FAQ (at with recommendations for practice (pages 2-3)).

10 Statements on Artificial Intelligence (AI)

1. There is not *just one* AI, but many types of AI systems with different functions (for text and image generation, translation, search, correction, conversion, etc.).
2. AI is currently not "intelligent", but rather a form of automation known as so-called "weak AI". It involves the probability-based analysis of large amounts of data by algorithms, combining models (designed and trained by humans) and (human) assessments.
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6. AI has no competence to act because this, like the responsibility for the use of AI, always lies with humans. The university has to ensure this human responsibility through appropriate measures.
7. AI must always be seen in relation to the purpose for which it is used (as a tool), because AI is a tool with major ethical, legal and social implications.
8. AI permeates all areas of life and is already being used in education. Therefore, AI cannot be ignored and should also be accessible to everyone.
9. Education as a whole is a particular sector that requires special AI regulations and care due to the general human rights to education, child protection, privacy, etc.
10. The use of AI systems in universities must not be completely automated. Decisions and evaluations have always to be the responsibility of humans.

More information, examples and literature recommendations: <https://ethischeki.competence.eu>

About our Network "Ethische Nutzung von KI" (Ethical Use of AI), the authors, the open and free licence and the recommended citation:

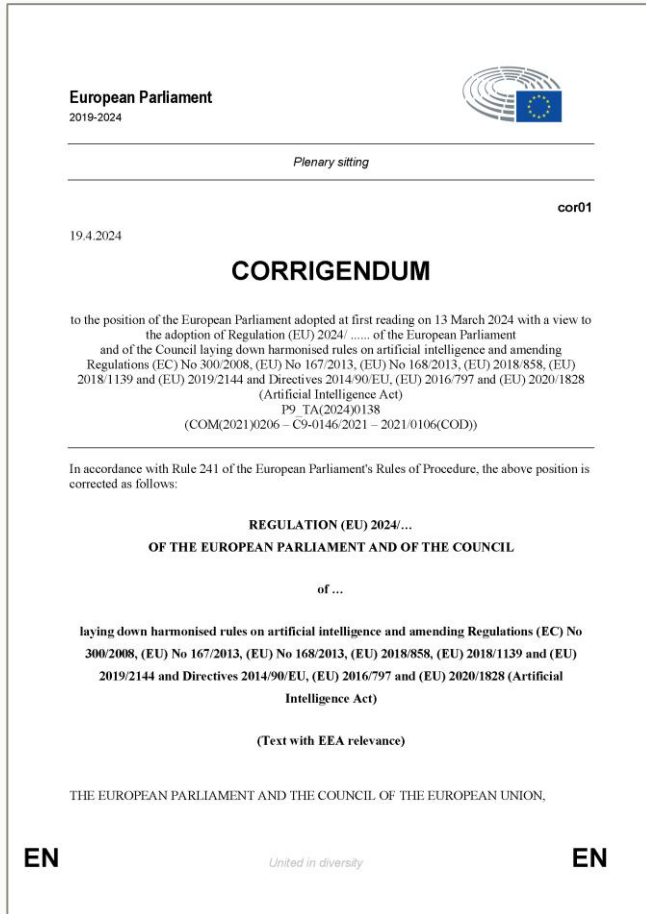
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By: Christian M. Stracke (Universität Bonn), Bärbel Bohr (Ostschweizer Fachhochschule), Sonja Gabriel (ZFH Wien/Krems), Nina Gallia, Martin Hoffmann (Pädagogische Hochschule St. Gallen), Heike Karolyi (FernUniversität in Hagen), Heike Menzmann-Hoffmann (Universität Münster), Julia Maria Möngg (Universität Bonn), Margot Munderof (Hochschule Kassel/Lautern), Simone Ojuel (FernUniversität in Hagen), Janine Rische-Neß (HAW Berlin), Markus Schröppel (HMKW Hochschule für Medien), Alexis Siveski (Universität für Weiterbildung Kreml), Gudrun Anne Strodt (Jade Hochschule) – edited by the Network "Ethische Nutzung von KI" with open & free licence: <https://creativecommons.org/licenses/by/4.0/>

Recommended citation: Stracke, C. M., Bohr, B., Gabriel, S., Gallia, N., Hoffmann, M., Karolyi, H., Menzmann-Hoffmann, H., Möngg, J. M., Munderof, M., Ojuel, S., Rische-Neß, J., Schröppel, M., Siveski, A., & Strodt, G. (2024). What is Artificial Intelligence (AI)? How can I use AI ethically at university? Edited by the German Network "Ethische Nutzung von KI". <https://doi.org/10.5281/zenodo.10995669>



AI Act



Impact-oriented approach

2021-04-21: Proposed by the European Commission

2023: General-purpose AI added

2024-03-13: Approved by the European Parliament

2024-05-21: Approved by the EU Council



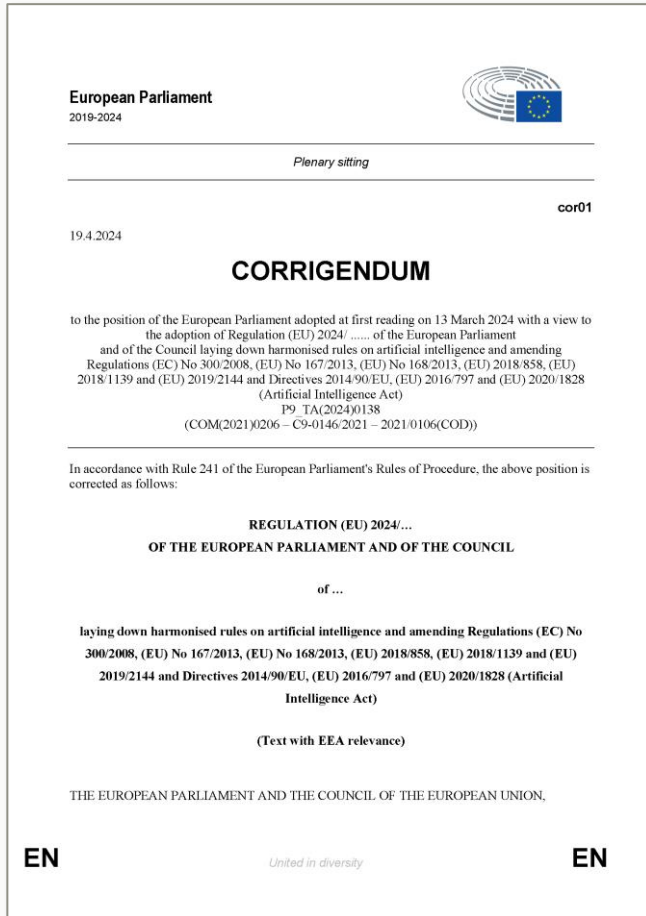
AI Act

Unacceptable risk AI systems:
prohibited

High-risk AI systems: regulated

Limited risk AI systems: transparency
and awareness obligations

Minimal risk AI systems: unregulated





AI Act

Unacceptable risk = prohibited

- **distorting behaviour, decision-making & causing significant harm**
- **exploiting vulnerabilities & biometrics**
- **creating & using social scoring & profiling**
- **inferring facial & emotional recognition**
- **real-time remote biometric identification**

but several exceptions

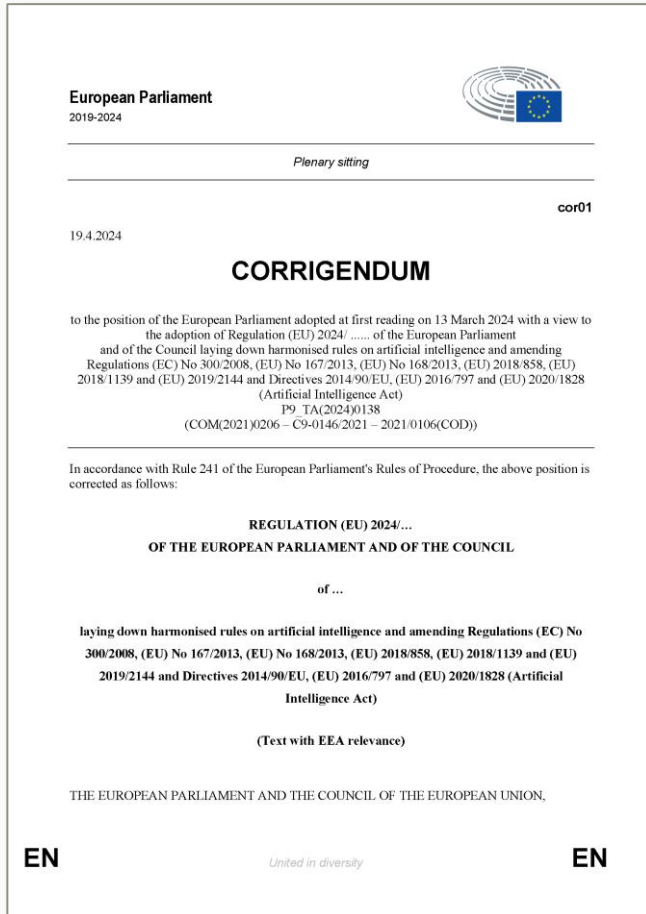




AI Act

High-risk AI systems = regulated

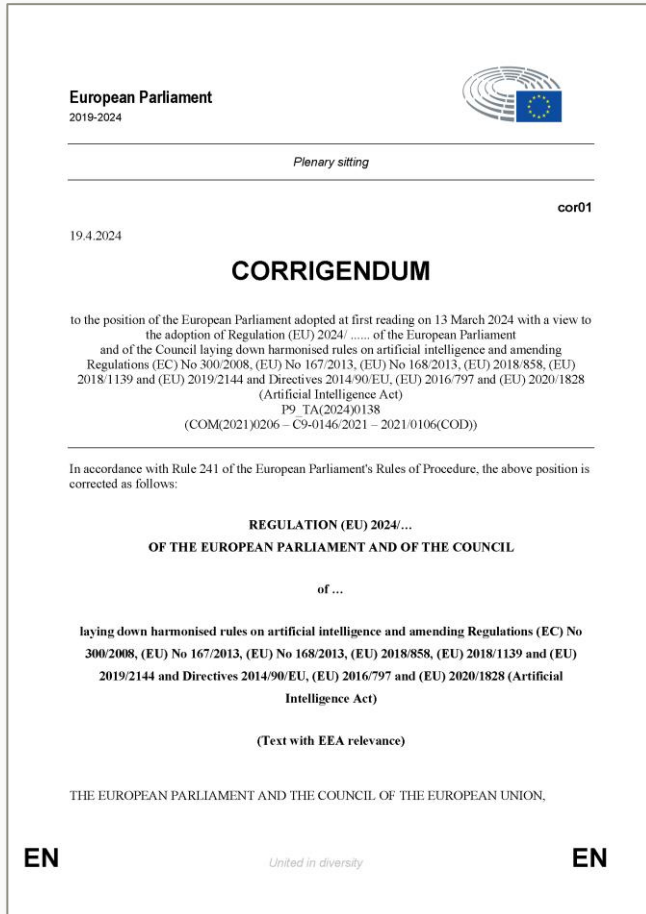
- covered by EU laws in Annex I & requiring a third-party conformity assessment
 - listed under Annex III use cases such as non-banned biometrics, infrastructure, education, employment, access, law, migration, legal & public administration
- but several exceptions





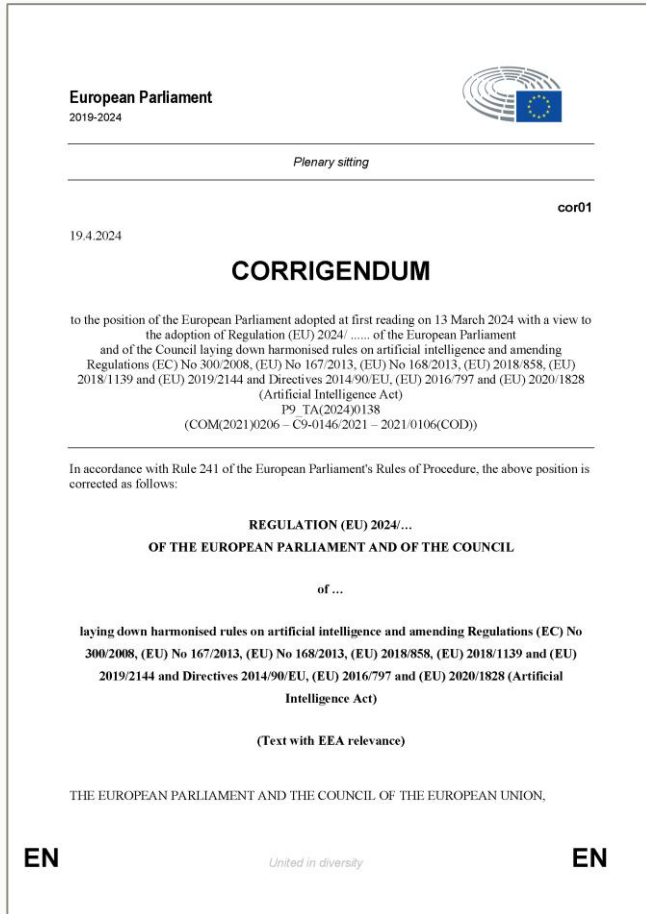
AI Act

Limited risk = Certain AI systems
= transparency obligations for AI
providers and deployers
ensuring that end-users are aware
that they are interacting with AI
(chatbots and deepfakes)





AI Act



General-purpose AI Models = providing technical, supplier, copyright & training documentation

General-purpose AI with systemic risk = evaluating & mitigating risks, incidents & cybersecurity protection (with code of practice or compliance)



AI Act

Governance by AI Office

Timeline with diverse deadlines

Conformity assessment, registration, technical documentation, AI criteria,

Code of Practice to be defined

Annexes can be changed

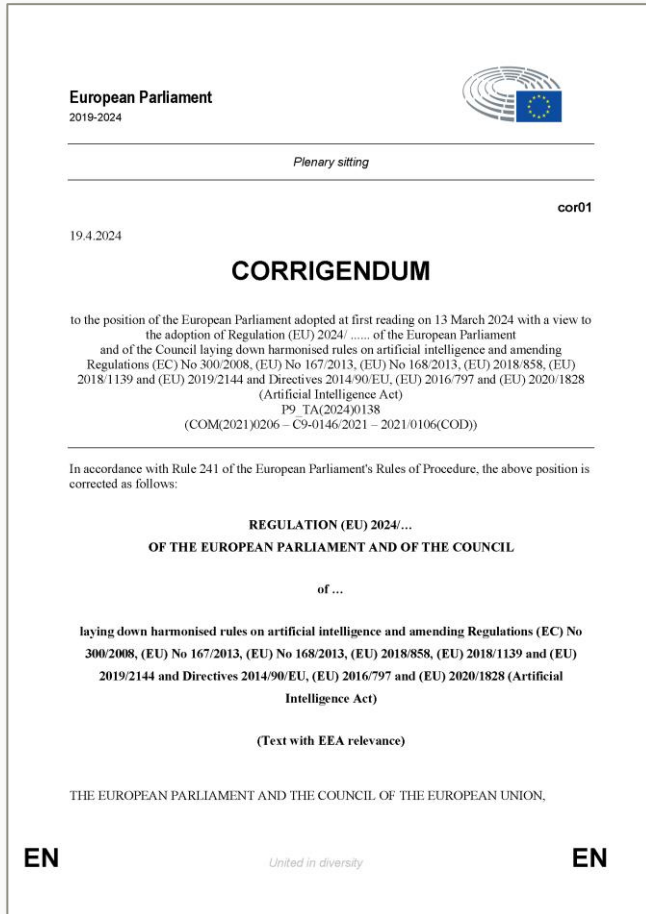




AI Act

Education in AI Act:

- **Recitals 4, 48, 44, 56 & 96**
- **Articles 4 (AI literacy), 5 (Prohibited) & 9 (High-risk)**
- **Annex III (High-risk)**



AI&ED Expert Group by CoE



<https://opening-up.education/artificial-intelligence-and-education>

Our networks



AI and Education Workshop

@ AIED Conference 2024 in Recife, Brazil

<http://aied2024.learning-innovations.eu>



Network "Ethical use of AI"

European Community for AI policies

<https://ethicalai.ecompetence.eu>

Networks "Ethical use of AI"

European & German networks

Guidelines "What is AI?"

for teachers at universities

- 10 statements (1 page)
- FAQ with answers plus practice recommendations (2 pages)

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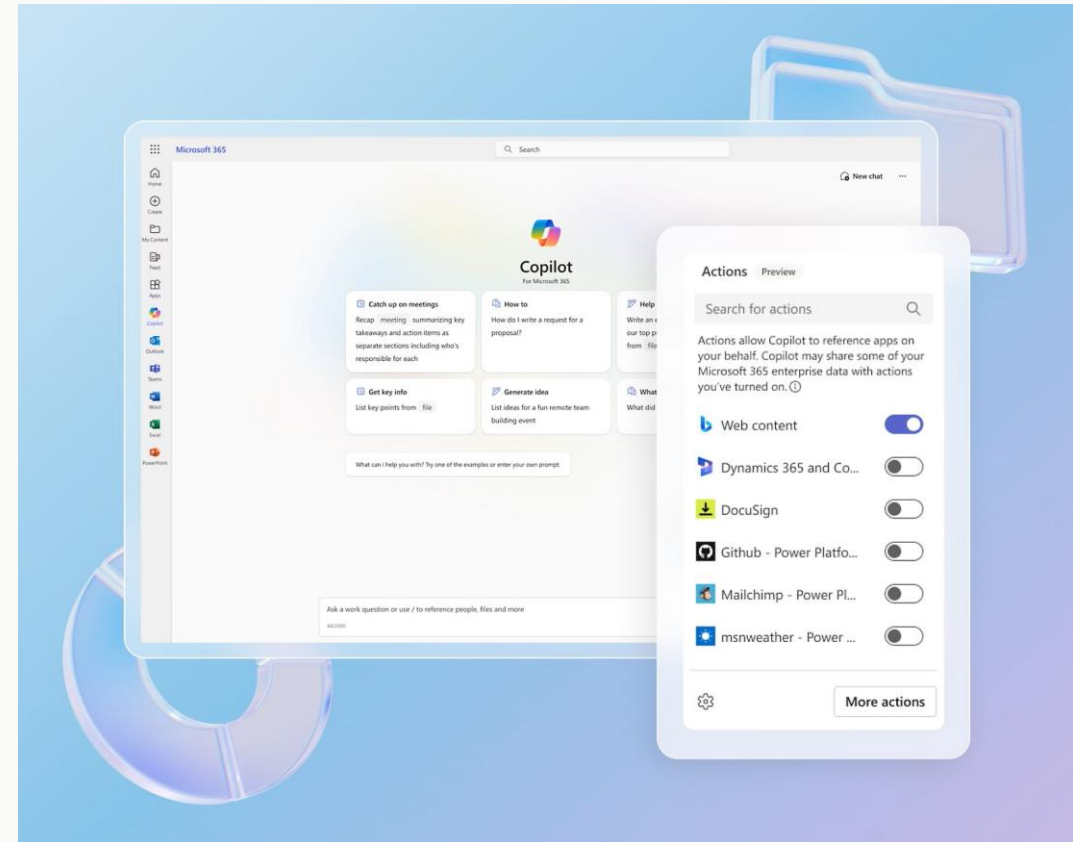
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And the AI future?



My key messages



1. Artificial intelligence changes more than computers and COVID-19 (& everything)



**2. AI has to be regulated worldwide:
There is only little time ...**



3. Education and AI have to focus more ethics, democracy, & the social society

<https://opening-up.education/artificial-intelligence-and-education>

AI and Education

Interested? Contact me!



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www.hrz.uni-bonn.de





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and many more, all are openly and freely available at: <http://www.opening-up.education>

Let us cooperate!



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Thank you for your attention!

Interested? What are your questions?



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