

The Role of Artificial Intelligence in Building Responsible Open Science Infrastructures

Research Data Alliance's (RDA) 10th Anniversary Webinar
Theme: Sustainable Development and Responsible Research

Wednesday, 27 September 2023, 13:00 to 15:00 UTC; 15:00 to 17:00 CEST
Registration [link](#)



Organised by the

European Open Science Cloud – Future (EOSC-Future) & Research Data Alliance (RDA)
Artificial Intelligence and Data Visitation Working Group (AIDV-WG)

In collaboration with the

Global Open Science Cloud (GOSC) Initiative
CODATA International Data Policy Committee (IDPC)

Webinar Description

As part of the Research Data Alliance's (RDA) 10th Anniversary celebrations under the theme, 'Sustainable Development and Responsible Research,' we are excited to present a thought-provoking webinar that delves into the vital intersection of artificial intelligence (AI) and responsible Open Science infrastructures. We address the question 'How can we ensure a human face to science in an increasingly digital/algorithmized world?' This webinar aims to explore the transformative potential of AI in shaping the landscape of Open Science while highlighting the ethical, legal, and societal considerations to support innovative and responsible AI practices in Open Science infrastructures and tools.

On the one hand, sustainable AI innovation relies heavily on the existence of open, trustworthy data ecosystems that the EOSC aims to provide. In turn, AI develops capabilities that increase the value of shared research assets. However, to ensure that AI and its data foundations are developed to enhance our individual and social lives, it is imperative that framing ethical, legal, and governance frameworks are developed across stakeholders.

We will provide an open platform for interactive discussion on the needs for ethics, human rights, and legal governance frameworks to support Open Science that engender the trust of society while promoting cutting-edge science that addresses the needs of society within the

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framework of the UN Sustainable Development Goals (SDGs) and, particularly, within the developing EOSC federated environment for sharing research data and services across Europe.

This webinar contributes to RDA's commitment to develop Open Science infrastructures across interdisciplinary and multi-sectoral communities that is responsive to the innovation needs of the major contributors and users of data in the sciences and humanities.

This webinar highlights the outputs of the EOSC-Future/RDA AIDV-WG's deliverables:

1. **Guidance on legal considerations for AI and DV:** a mapping of legal considerations for AI and DV as well as how to navigate legal frameworks for users of EOSC and other Open Science platforms. Specific attention will be given to the Schrems II decision and the effect of this on DV.
2. **Guidance for informed consent in AI and DV:** The GDPR and other EU data and AI regulations as well as regulations in other jurisdictions have placed heavy emphasis on the role of informed consent in data sharing and data publication. We will examine the role of informed consent in AI and DV, addressing fundamental challenges to current informed consent frameworks and practices. The aim is to provide guidance for researchers and data controllers across disciplines regarding informed consent in AI and DV.
3. **Guidance for ethics committees reviewing AI and DV:** Ethics committees (RECs/IRBs/IECs) have been confronted by new challenges when encountering the need for advice on data management and data sharing as well as in other areas of data processing. The use of AI and DV, especially in health-related research, requires investigation with regard to the ethical, legal, and social issues these raise for ethics committees and those submitting proposals for advice/approval to ethics committees. This guidance will assist ethics committees in understanding questions, methods, and procedures for reviewing AI and DV.
4. **An AI Bill of Rights:** Underlying the growing application and use of AI and DV is a concern to ensure that data subjects are protected by these new technologies. The AIDV-WG will draft an RDA AI Bill of Rights that promotes fundamental human rights and advances trust in AI and federated systems for Open Science.

The webinar unpacks these deliverables within the context of UNESCO's [Recommendation on Open Science](#) and its [Recommendation on the Ethics of Artificial Intelligence](#) as well as within the EU/EOSC infrastructures for AI and other leading national and international Open Science infrastructures.

Webinar Methodology and Framing Goals

This webinar is designed to be inclusive of a diverse global audience of researchers and professionals in scholarly communication and Open Science practices.

The webinar addresses AI in relation to the EOSC sustainability goals in several ways:

- AI techniques help to analyze and interpret large, complex research datasets and extract valuable insights to demonstrate the usefulness of sharing data through EOSC. This can promote adoption by the research community.
- AI services and analytics tools built on top of shared data assets can provide additional functionality that increases the value proposition of participating in the EOSC ecosystem.
- AI algorithms themselves and training datasets require standardization, transparency, and interoperability mechanisms - principles that are core to the EOSC's technical architectures.

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- Developing robust data governance frameworks for ethical use of AI and shared data resources is central to both EOSC sustainability and responsible AI innovation.
- Training programs in data science and AI contributes to developing the human capital and skills needed to fully utilize the potential of shared Open Science infrastructures enabled by EOSC.
- Public-private partnerships around AI/data can lead to innovative services, but require ethics, legal, and governance policies to balance interests and promote open access.
- Incentives and appropriate assessment metrics are needed to promote data contribution and reuse for AI, aligned with EOSC priorities.
- International cooperation on AI standards and systems can benefit from building on the foundations established by interoperable Open Science infrastructures like EOSC.

In a larger, more general way, the webinar considers the ways in which ethics, law, and governance are needed for co-developing AI responsibly in support of Open Science principles. This provides significant opportunities to progress towards the United Nation's Sustainable Development goals (SDGs) while also managing risks and prioritizing societal benefits. AI and Open Science each enable and require the other.

- Promoting AI applications in EOSC and other Open Science infrastructures contributes to healthcare, education, agriculture, environmental protection, and humanitarian responses and achieving specific SDGs when deployed responsibly.
- Open access to data, code, and research knowledge highlighted in the UNESCO Recommendation enables more equitable development of AI across communities and populations globally.
- UNESCO's emphasis on participative science aligns with the need for multidisciplinary and inclusive approaches to developing ethical and beneficial AI applications.
- Principles of transparency, accountability and scientific integrity in the Recommendation are crucial for trustworthy and unbiased AI in EOSC and other Open Science systems.
- Respect for human rights, cultural diversity, and environmental protection should guide AI innovation and prevent unintended harms within EOSC and Open Science ecosystems generally.
- Capacity building for data science and AI skills supports wider participation recommended by UNESCO.
- International cooperation on AI research, development, and governance is necessary to create global public goods, as envisioned by the SDGs.
- AI regulation and standardization should be developed collaboratively with scientific communities, in line with UNESCO and EOSC principles.

Webinar Impact

The AIDV-WG's contributions to AI governance, ethics, and human rights for Open Science in the EU and internationally are expected to lead to several significant impacts across various current issues of importance to EOSC, RDA, and the global Open Science community. The webinar aims to impact the following areas:

- **Responsible Innovation:** Active participation in AI governance and ethics discussions ensures that Open Science projects leverage AI technologies in ways that align with ethical principles and human rights. This promotes responsible science and innovation by

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preventing the development and deployment of AI systems that could lead to unintended negative consequences.

- **Enhanced Trust:** Demonstrating a commitment to AI ethics and human rights builds trust among stakeholders, including researchers, policymakers, the public, and industry players. Trust is vital for the successful adoption and integration of AI technologies in Open Science, encouraging collaboration and knowledge sharing.
- **Ethical Decision-Making:** Contributions to AI governance enable organizations to make informed and ethical decisions throughout the AI lifecycle. By adhering to established guidelines and principles, Open Science initiatives can navigate complex ethical dilemmas effectively.
- **Safeguarding Human Rights:** By prioritizing human rights in AI development, organizations contribute to ensuring that AI technologies respect individuals' rights to privacy, freedom of expression, and non-discrimination. This safeguarding protects both researchers and participants in Open Science projects.
- **Mitigating Bias and Discrimination:** Active involvement in AI ethics efforts helps identify and mitigate biases that can be present in AI algorithms. This reduces the risk of discriminatory outcomes and promotes inclusivity within Open Science initiatives.
- **Global Leadership:** Contributing to AI governance and ethics positions the EU as a global leader in responsible AI development. It enables the EU to influence international discussions, share best practices, and contribute to shaping global AI norms.
- **Standardization and Consistency:** Engaging in AI governance efforts supports the development of standardized practices and guidelines. This consistency simplifies compliance for Open Science projects, ensuring that AI technologies are aligned with international norms.
- **Ethical Reputation:** Organizations that actively address AI ethics and human rights concerns gain a reputation for ethical leadership. This reputation can attract collaboration opportunities, funding, and partnerships that align with responsible Open Science practices.
- **Long-Term Sustainability:** Contributions to AI governance and ethics ensure that Open Science projects remain sustainable in the long run. By addressing ethical and human rights considerations, organizations prevent potential legal and ethical challenges that could hinder their progress.
- **Positive Social Impact:** Ultimately, the impact of AI technologies on society depends on how they are developed and deployed. Contributions to AI ethics and human rights ensure that Open Science initiatives generate positive societal impact by advancing knowledge, supporting informed decision-making, and fostering equitable access to scientific advancements.

In summary, this webinar is intended to contribute to the RDA and global discussion on the role of AI governance, ethics, and human rights in EOSC and internationally, particularly in relation to responsible innovation, increased trust, ethical decision-making, and a positive societal impact. The AIDV-WG's deliverables are intended to set high standards for AI technologies while promoting a more inclusive, equitable, and ethically driven Open Science ecosystem in the EU and globally.

Target Audience

This webinar is designed specifically for the EOSC and RDA communities as well as for researchers, data scientists, library scientists, policymakers, ethicists, and individuals interested in the transformative potential of AI in Open Science. Whether you are actively involved in

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Open Science initiatives, AI development, building Open Science infrastructures or policymaking, this event offers a platform to explore the ethical, legal, and governance dimensions of the intersection between AI and Open Science. The webinar is intended for scientists across disciplines, including the social sciences and the humanities, as well as for those building software and applications, and those at the interface between data and society.

Join us as we unravel the intricate relationship between AI and responsible Open Science infrastructures. Be part of a stimulating conversation that paves the way for a human-focused impactful governance future in research and data-driven innovation. Participants will have an opportunity to ask questions, seek insights, and delve deeper into the nuances of AI's role in responsible Open Science infrastructures.

Webinar Agenda

Time	Topic	Presenter
00:00	Welcome and Opening Remarks	TBD
00:10	Keynote Address This will set the stage by discussing the profound impact of AI on Open Science. The talk will highlight how AI technologies are reshaping data analysis, knowledge discovery, and collaboration in research, and the importance of integrating responsible AI practices to ensure ethical research outcomes.	TBD
00:25	Actions: Panel Discussion Navigating the legal, ethical, and human rights implications of AI in Open Science Building humanity and human rights into Open Science infrastructures Does algorithmic regulation lead enhance or inhibit Open Science? Is consent a personal choice or a social good for Open Science? What responsibilities do ethics committees have for the role of AI in Open Science?	TBD
00:50	Interactive Discussion with the Audience How can we develop responsible AI governance for innovation, increased trust, ethical decision-making, and a positive societal impact from EOSC and other Open Science infrastructures?	TBD
01:10	Implementation: Panel Discussion Governance for AI in European Open Science Cloud (EOSC) Governance for AI in the Global Open Science Cloud (GOSC) Initiative Modelling governance for AI through the Global Open Research Commons (GORC) Working Group	TBD

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Time	Topic	Presenter
01:40	Interactive Discussion with the Audience How can we responsibly address the challenges faced, lessons learned, and best practices needed for ensuring responsible AI adoption in Open Science infrastructures?	TBD
01:55	Summary	
02:00	Close	