

Imagining the AI Landscape after the AI Act

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Abstract

We summarize the first Workshop on Imagining the AI Landscape after the AI Act (IAIL 2022), co-located with 1st International Conference on Hybrid Human-Artificial Intelligence (HHAI 2022), held on June 13, 2022 in Amsterdam, Netherlands.

1. Introduction

In April 2021, the EU Parliament published a proposal, the AI Act (AIA), for regulating the use of AI systems and services in the Union market. However, the effects of EU digital regulations usually transcend its confines. An example of what has been named the "Brussel effect" - the high impact of EU digital regulations around the world - is the General Data Protection Regulation (GDPR), which came into effect in May 2018 and rapidly became a world standard. The AIA seems to go in the same direction, having a clear extraterritorial scope, in that it applies to any AI system or service that has an impact on European Citizens, regardless of where its provider or user is located. The AIA adopts a risk-based approach that bans certain technologies, proposes strict regulations for "high risk" ones, and imposes stringent transparency criteria for others. If adopted, the AIA will undoubtedly have a significant impact in the EU and beyond. A crucial question is whether we already have the technology to comply with the proposed regulation and to what extent can the requirements of this regulation be enforceable.

The IAIL workshop aimed at analyzing how this new regulation will shape the AI technologies of the future, collecting together input and discussions from multidisciplinary stakeholders.

The purpose of IAIL 2022 was to investigate if we already have the technology to comply with the proposed regulation, how to operationalize the ethical requirements of the AI Act, to what extent does the AI act protect individual rights, if we need to define new metrics for

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validating the goodness of an AI system in terms of privacy, fairness, explainability, and so on, and how will the proposed AI Act impact (non-)EU tech companies operating in the EU.

Topics of interest include, but are not limited to:

- The AI Act and future technologies
- Applications of AI in the legal domain
- Ethical and legal issues of AI technology and its application
- Dataset quality evaluation
- AI and human oversight
- AI and human autonomy
- Accountability and Liability of AI
- Algorithmic bias, discrimination, and inequality
- Trust in practical applications of and data-driven decision-making in AI systems
- Transparent AI
- AI and human rights
- The impact of AI and automatic decision-making on rule of law
- Explainable by design
- Privacy by design
- Fairness by design
- AI risk assessment
- Explainability metrics and evaluation

Papers intended to foster discussion and exchange of ideas. Submissions with an interdisciplinary orientation were particularly welcome, e.g. works at the boundary between machine learning, AI, human-computer interaction, law, digital philosopher, and ethics.

2. Organization

2.1. Workshop Chairs

- Desara Dushi, Vrije Universiteit Brussel, Belgium
- Francesca Naretto, Scuola Normale Superiore, Italy
- Cecilia Panugutti, European Commission – Joint Research Centre, Italy
- Francesca Pratesi, Institute of Information Science and Technologies - National Research Council, Italy

2.2. Program Committee

- Denise Amram - Scuola Superiore Sant'Anna
- Nertil Bërdufi - University College Beder
- Andrea Gadotti - Imperial College London
- Olga Gkotsopoulou - Vrije Universiteit Brussels
- Sarah De Nigris - JRC - European Commission

- Joanna Kulesza - University of Lodz
- Gianclaudio Malgieri - EDHEC Business School
- Anna Monreale - University of Pisa
- Yves-Alexandre de Montjoye - Imperial College London
- Rūta Liepiņa - Maastricht University
- Roberto Pellungrini - University of Pisa
- Giorgia Pozzi - TUDelft
- Giulia Schneider - Università Cattolica del Sacro Cuore
- Dennis Vetter - Goethe University Frankfurt

3. Summary of the workshop

The workshop was highly interdisciplinary and brought together researchers from different backgrounds: computer science, law, philosophy, and social sciences. Participants expressed their appreciation for such an interdisciplinary venue of discussion.

The workshop consisted of two sessions of paper presentations with a QA, one keynote speech from Virginia Dignum, one fireside chat with Mireille Hildebrandt and one group activity.

Both participants and the keynote speakers raised some concerns about the AI Act and had a fruitful discussion about it. The main concerns raised were related to the enforcement of the AI Act, the feasibility of the implementation of AIA technical requirements (for example “Training, validation and testing data sets shall be relevant, representative, free of errors and complete”, Article 10(3)) and the need to address the issues of power behind the development and deployment of AI in a more fundamental way.

The group activity used Design Fiction tools to perform a structured brainstorming around how to implement a process/methodology to be compliant with Art.14 on Human Oversight. More specifically, participants were presented with a fictional narrative describing how postcode bias might lead to discrimination against the poor. This type of bias is more subtle compared to other types of biases such as gender or race bias, so enabling human oversight is more difficult. Overall the discussions allowed participants to have a deeper understanding of the implications of the AI Act and EU digital policies

3.1. Submissions

The Program Committee (PC) received a total of 17 submissions. Each paper was peer-reviewed by at least three PC members, by following a double-blind reviewing process. The committee decided to accept 11 papers: 3 regular papers (i.e., 12+ pages), 6 short papers, and 2 abstracts. The abstract can contain preliminary or already published work, while papers must contain original work.

3.2. Detailed Program

The IAIL 2022 program was organized in two thematic sessions, two invited talks, and one group activity.

The thematic sessions followed a highly interactive format. They were structured into short pitches, and ample room for questions and comments. Session Chairs introduced sessions and participants. The Chair moderated sessions and discussions.

Papers were grouped in two sessions:

Session 1 - Technical Aspects of AI Act

- Dennis Vetter, Jesmin Jahan Tithi, Magnus Westerlund, Roberto V. Zicari, and Gemma Roig, *Using Sentence Embeddings and Semantic Similarity for Seeking Consensus when Assessing Trustworthy AI*
- Natali Helberger, *FutureNewsCorp, or how the AI Act changed the future of news*
- Maciej Zuziak and Salvatore Rinzivillo, *Federated Learning as an Analytical Framework for Personal Data Management – a proposition paper*
- Paula Subías-Beltrán, Oriol Pujol, and Itziar de Lecuona, *The forgotten human autonomy in Machine Learning*
- Costanza Alfieri, Francesca Carocchia, and Paola Inverardi, *AI Act and Individual Rights: A Juridical and Technical Perspective*

Session 2 - Ethical and Legal Aspects about AI Act

- Marc Anderson, *Some Ethical Reflections on the EU AI Act*
- Jonne Maas, *A Neo-republican Critique of AI ethics*
- Jerome De Cooman, *Without Any Prejudice? The Antitrust Implication of the AI Act*
- Pietro Dunn and Giovanni De Gregorio, *The Ambiguous Risk-Based Approach of the Artificial Intelligence Act: Links and Discrepancies with Other Union Strategies*
- Michał Araszkiewicz, Grzegorz J. Nalepa, and Radosław Pałosz, *The Artificial Intelligence Act. A Jurisprudential View*
- Farhana Ferdousi Liza, *Challenges of Enforcing Regulations in Artificial Intelligence Act – Analyzing Quantity Requirement in Data and Data Governance*

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- SoBigData++ (GA n. 871042) - “European Integrated Infrastructure for Social Mining and Big Data Analytics” (<https://plusplus.sobigdata.eu/>)
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