AI4Gov

Trusted AI for Transparent Public Governance
fostering Democratic Values

Deliverable 5.1

Input Papers to Facilitate the Workshops on Awareness Raising V1

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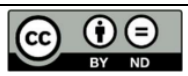
License	 This work is licensed under a Creative Commons Attribution-No Derivatives 4.0 International License (CC BY-ND 4.0). See: https://creativecommons.org/licenses/by-nd/4.0/

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Abbreviations

Abbreviation	Description
AI	Artificial Intelligence
DPB	Diputación Provincial de Badajoz
JSI	Josef Stefan Institute
MT	Greek Ministry of Tourism
VVV	Municipality of Vari-Voula-Vouliagmeni

Abstract

This document results from task 5.1 of Work Package 5 (WP5) in the AI4Gov project, aimed at fostering citizen engagement and inclusiveness through ethical AI technologies. WP5 focuses on enhancing awareness and promoting ethical AI practices among stakeholders and the public. Task 5.1 involved organizing panel discussions on AI governance, inclusiveness, discrimination, biases, and transparency. These discussions, led by Aristotle University of Thessaloniki (AUTH), provided valuable insights into mitigating AI bias and discrimination and enhancing inclusiveness, representation, participation, openness, pluralism, and tolerance.

The document presents a comprehensive analysis based on focus groups and panel discussions held during the first 18 months of the AI4Gov project. It aims to inform and facilitate workshops designed to raise citizen awareness about AI bias and ethics. The findings and recommendations offer actionable insights for developing effective awareness-raising strategies, ultimately serving as a foundational resource for creating workshops that educate and empower citizens to advocate for ethical AI practices.

1 Introduction

1.1 Purpose and scope

The present document is an outcome of all the activities completed throughout the implementation of task 5.1 which is part of WP5 in AI4Gov project.

The AI4Gov project aims to foster citizen engagement and inclusiveness in democratic processes through the development and implementation of ethical and transparent AI technologies. WP5 specifically focuses on enhancing awareness and promoting ethical AI practices among stakeholders and the public. The goal of T5.1 is to organize panel discussions focused on ethical aspects of AI when used in Governance and mainly inclusiveness, discriminations, biases and transparency.

According to T5.1 prerequisites several panel discussions with key actors from different sectors that use AI is expected to take place within the project's lifecycle. The Panel discussions will enable participants to exchange views, provide input depending on their expertise, area of activities, interests and participation in different policy areas.

Acknowledging that AI is more than a technical issue, this discussion will examine the trade-offs related to fairness, bias, civic engagement and raise of awareness, the types of stakeholders to be targeted and the means to approach the latter towards supporting societal change (e.g., technicality of AI and ways to transfer relevant knowledge to non-experts).

The Lead partner (Aristotle University of Thessaloniki, AUTH) will organize the meetings/ workshops on Inclusive AI in conference venues (to be procured), with three such workshops foreseen. These workshops will be based on input papers with data on existing awareness-raising strategies to mitigate AI bias and discrimination and to enhance inclusiveness, representation, participation, openness, pluralism, and tolerance.

Potential groups will be targeted in the context of the AI4Gov action plan (incl. their profile, agenda, needs, and possible barriers in involving the above groups in such initiatives). All partners & stakeholder group members will participate. Lead partner will develop summary reports on conclusions and partners will organize debriefing meetings to diffuse lessons learnt in their networks.

As Artificial Intelligence (AI) is increasingly integrated into various aspects of daily life, promising significant advancements but also raising critical ethical and social concerns. Among these concerns, AI bias and discrimination have emerged as pressing issues that can perpetuate existing inequalities and introduce new forms of injustice. Therefore, this document presents a comprehensive analysis based on focus groups and panel discussions that were organized during the first 18 months of the AI4Gov project, centred on AI bias and ethics. The primary aim is to inform and facilitate the development and implementation of workshops designed to raise awareness among citizens about these critical issues in the life cycle of AI4Gov project.

The goals of this initiative are to enhance understanding of AI bias and its societal impacts, to promote ethical practices in AI development and deployment, and to foster an inclusive dialogue

among stakeholders. By engaging diverse participants, including local community members, experts, and policymakers, these workshops aim to cultivate a well-informed public that can actively participate in shaping the ethical frameworks governing AI technologies.

The content of this document is structured to provide a detailed exploration of AI bias, its manifestations, and implications across different sectors, including healthcare, governance, and sustainable development. It also synthesizes the findings and recommendations from various discussions, providing actionable insights for developing effective awareness-raising strategies. Ultimately, this document serves as a foundational resource for creating workshops that not only educate but also empower citizens to advocate for ethical AI practices.

1.2 Document structure

The document begins with an Abstract, providing a brief summary of the document's contents, goals, and key findings. Following the abstract, the Introduction outlines the purpose and scope of the document, explaining the goals and aims of the initiative and describing the content and structure of the document.

The next section, Understanding AI Bias and Discrimination, defines AI bias and discusses its impact across various societal domains. It elaborates on both conscious (explicit) and unconscious (implicit) biases, highlighting their potential to perpetuate social inequalities and injustices.

In Preliminary Focus Groups with Pilot Case Users, the document synthesizes insights from focus group discussions held in April 2024. This section describes the focus groups, their main findings, and recommendations related to AI and Sustainable Development Goals (SDGs), evaluation methodologies, and addresses biases in AI. The Panel Discussions section summarizes key points from discussions on AI and governance. It includes detailed findings and recommendations from panels on topics such as digital transformation, AI implementation in local governance, challenges and ethical considerations, AI in tourism policy, and inclusivity in AI for citizens. Specific panel discussions on AI in healthcare and governance are also covered, highlighting regulatory challenges, transparency, trust, and the impact of AI on public services.

Existing Awareness Strategies provides an overview of current strategies aimed at mitigating AI bias and discrimination. It discusses educational campaigns, public awareness initiatives, policies, regulations, and corporate efforts to promote fairness and accountability in AI systems. Developing Effective Workshops outlines guidelines for creating workshops to raise awareness about AI bias and discrimination. This section details the workshop objectives, content, and structure, emphasizing the importance of combining theoretical knowledge with practical exercises.

The Conclusions section summarizes the main findings from the focus groups and panel discussions, offering key recommendations for mitigating AI bias and enhancing inclusiveness, participation, and transparency in AI applications. References lists all sources and references cited throughout the document, ensuring that the information provided is well-supported and credible.

2 Understanding AI Bias and Discrimination

2.1 Definition of AI Bias

Bias, as defined in the AI4Gov project, refers to *an inclination or prejudice for or against an individual or group that is considered unfair. This unfair bias can arise from personal experiences, societal norms and expectations, or information absorbed from various sources such as media, education, and family (Greenwald & Krieger, 2006). Bias can be categorized into two primary types: conscious (explicit) bias and unconscious (implicit) bias (Banaji & Greenwald, 2013). Both types can significantly impact individuals and society by perpetuating social inequalities and injustices.*

Conscious bias, also known as explicit bias, involves prejudices that individuals openly and deliberately maintain. These biases manifest through direct remarks, discriminatory behavior, or policies that favor certain groups over others (Dovidio et al., 2002; Dovidio & Gaertner, 2004). Unconscious bias, or implicit bias, operates at a subconscious level and often goes unrecognized by those who hold such biases. It involves automatic associations and stereotypes based on characteristics like race, gender, or ethnicity (Greenwald & Banaji, 1995). This type of bias can lead to unequal opportunities in various contexts, such as education, healthcare, and the workplace (Fitzgerald & Hurst, 2017).

Furthermore, one can identify cognitive bias: a systematic pattern of deviation from norm or rationality in judgment, whereby individuals create their own subjective reality based on their perception of information (Kahneman, 2011). These biases arise from various cognitive processes, including heuristics, social influences, and emotional factors, leading to errors in reasoning, evaluation, and decision-making. Cognitive bias can affect AI decision-making, embedding human prejudices into machine processes. Understanding and addressing these biases is essential to develop fairer and more accurate AI systems, thereby reducing AI-driven discrimination and promoting equity in various societal domains.

2.2 Impact of AI Discrimination

The impact of AI bias extends to various societal domains, contributing to discrimination and inequality. In education, AI systems influenced by bias can perpetuate disparities in student assessments and opportunities. In healthcare, biased AI algorithms can result in misdiagnosis or inadequate treatment for certain groups, exacerbating health inequalities (Panch et al., 2019; Nazer et al., 2023). In employment, biased AI systems can affect hiring and promotion decisions, leading to a lack of diversity and inclusivity in the workplace. In general, cognitive biases in AI can lead to decisions that are not in the best interest of users, perpetuating existing inequalities and missing valuable opportunities.

Therefore, it is crucial to recognize the existence of these biases and implement strategies to counteract them. This includes ensuring diverse and representative training data, conducting regular bias audits, and fostering an environment where multiple perspectives are considered. By

actively seeking information that contradicts pre-existing beliefs and questioning assumptions (Lilienfeld, Ammirati, & Landfield, 2009; Stanovich & West, 2008), AI developers can mitigate the impact of cognitive biases.

Bias in AI systems can originate from the data used to train these systems. If the training data reflects existing societal biases, the AI will likely replicate and amplify these biases in its outputs. For instance, if an AI system is trained on historical hiring data that includes biases against certain demographics, the system may continue to favor certain groups over others in its recommendations. Addressing AI bias involves ensuring that training data is representative and free from biases, alongside developing algorithms that can identify and mitigate bias during the decision-making process.

3 Preliminary Focus Groups with Pilot Cases Users

3.1 Description

This chapter synthesizes the key insights and recommendations derived from three focus group discussions during April 2024. All users of the pilot cases (JSI, VVV, MT and DPB) were invited to participate in order to discuss in free context on ethical aspects of their pilot cases and the platforms which are to be developed in the frames of the AI4Gov project. The discussions primarily focused on the use of AI platforms for evaluating projects in terms of bias, ethics, and alignment with standards such as legislation, recommendations or for example Sustainable Development Goals (SDGs). The discussions provided valuable insights into the challenges and opportunities of using AI platforms for evaluating projects and developing sustainable tourism policies. By addressing biases, improving evaluation methodologies, fostering collaboration, and ensuring ethical compliance, AI can significantly contribute to sustainable development and informed decision-making. The recommendations outlined aim to guide the development and implementation of AI platforms that are ethical, effective, and inclusive.

3.2 Main Findings

3.2.1 AI and Sustainable Development Goals (SDGs)

The participants acknowledged the significant potential of AI in addressing SDGs, highlighting the necessity of a comprehensive evaluation framework to measure the impact of AI projects on sustainable development. Effective communication among stakeholders emerged as crucial to ensure the evaluation process captures the intended outcomes of AI projects. The importance of cross-disciplinary collaboration and consideration of cultural and geographical contexts in AI applications were emphasized as essential components for successful AI integration.

3.2.2 Evaluation Methodologies

The discussions revealed the limitations of current evaluation methodologies, such as the GPT-4 framework, which need to be addressed to better capture the intended outcomes of AI projects. Participants proposed the development of more comprehensive evaluation frameworks that take into account the intended purpose of the AI application, stakeholder input, and the specific context in which the AI will be used. Incorporating key performance indicators (KPIs) to track the impact of AI projects on SDGs and ethical considerations was suggested as a way to enhance these methodologies. Tailoring the evaluation process to individual projects was emphasized to ensure relevance and effectiveness.

3.2.3 Addressing Biases in AI

A significant portion of the discussions focused on understanding and addressing biases in AI. Participants stressed the need to redesign evaluation forms to better address and mitigate biases. They discussed various frameworks for AI ethics, including the UNESCO AI Ethics Framework and

the IEEE AI Ethics Framework, as tools to address biases. The conversation highlighted the technical and philosophical aspects of mitigating biases, including issues related to data collection, model building, and the developers' contexts. Addressing these aspects is critical to developing countermeasures against potential biases in AI solutions.

3.2.4 AI Platform for Sustainable Tourism Policy

The discussions on the AI platform for sustainable tourism policy, specifically with the partners from VVV and MT in the early stages of the AI4GOV project, revolved around its objectives and potential applications. Participants highlighted that the platform should support data-driven decision-making for sustainable tourism by enabling the collection, analysis, and visualization of relevant data. The integration of the platform with existing systems and databases was considered essential for seamless communication and data exchange.

3.2.5 Community Engagement

Engaging the community in the development and implementation of the AI platform was deemed crucial. Participants emphasized involving local stakeholders such as residents, businesses, and NGOs in the decision-making process facilitated by the AI platform. Educating the community on the benefits and potential risks of using AI in sustainable tourism policy was highlighted as a key step towards ensuring transparency and accountability in the platform's decision-making process.

3.2.6 Human Factors and Infrastructure

The management of human factors and infrastructure related to the AI platform was another major topic of discussion. Ensuring that the AI platform is accessible and user-friendly for various stakeholders, including municipal staff and policymakers, was considered essential. Providing training and support to stakeholders on using the AI platform effectively and responsibly was also emphasized. Continuous monitoring and evaluation of the AI platform's performance and impact on sustainable tourism policy were recommended to make necessary adjustments and improvements over time.

3.2.7 Ethical and Legal Considerations

The ethical and legal considerations associated with AI were a recurring theme throughout the discussions. Participants highlighted the importance of anonymizing personal data and complying with AI regulations to address ethical concerns. Avoiding discrimination based on gender, age, nationality, and other factors was emphasized, with a focus on creating comprehensive data characterizations to prevent bias from entering the system.

3.2.8 Real-Time Data and Decision Support

The discussions also covered the importance of real-time data for informed decision-making. The installation of sensor-based systems, like All Oran, to monitor various aspects such as traffic and waste management was considered crucial for providing real-time data. Participants stressed the need to balance automation with human oversight, ensuring that while AI can provide valuable

support through information analysis and insights, final decisions should be made by human beings to ensure ethical and contextual appropriateness.

3.2.9 Recommendations

To develop comprehensive evaluation frameworks, it is recommended to create robust frameworks that consider the purpose, stakeholder input, and context of AI applications. Using KPIs to track and evaluate the impact of AI projects on SDGs and ethical considerations is necessary. Enhancing bias mitigation strategies involves redesigning evaluation forms and implementing established ethics frameworks to address biases effectively. Cross-disciplinary collaboration should be fostered to incorporate diverse perspectives in AI project evaluations and consider cultural and geographical contexts.

Engaging and educating stakeholders by involving local communities, businesses, and NGOs in the decision-making process facilitated by AI platforms is crucial. Educating stakeholders on the benefits and risks of AI can foster transparency and accountability. Ensuring ethical and legal compliance by prioritizing data privacy and preventing discrimination is essential. This can be achieved by creating comprehensive data characterizations and anonymizing personal data. Balancing automation with human oversight is recommended to use AI to support decision-making with real-time data and insights while ensuring final decisions are made by humans. Providing training and support to stakeholders is necessary for effective and responsible use of AI platforms. Implementing real-time monitoring systems, like sensor-based systems, can enhance decision-making in areas such as traffic and waste management.

4 1st Panel Discussions

In November 2023, AI4Gov organized a project event with two panel discussions followed by an educational workshop on the use of artificial intelligence in public governance, exclusively for a Greek audience (held in Greek language)[1].

More than 160 people participated in the hybrid event, including members of municipal councils and the academic community, experts and civil associations, while the event was welcomed by representatives of the Ministry of Digital Governance, as well as regional and local government.

The first panel discussion ran under the theme "Artificial Intelligence in Local Governance: Prospects and Challenges," and the second one was titled "Accessible and Inclusive Artificial Intelligence for Citizens".

The first panel provided valuable insights into the challenges and opportunities of using AI in local governance and public service delivery. Addressing biases, improving evaluation methodologies, fostering collaboration, and ensuring ethical compliance are critical to maximizing the benefits of AI. The second panel highlighted the importance of making AI accessible and inclusive for all citizens. By addressing digital barriers, enhancing support services, and promoting transparency and accountability, municipalities can ensure that AI technologies are used ethically and effectively to improve public services. The recommendations outlined in this report aim to guide the development and implementation of AI initiatives that are inclusive, fair, and beneficial to all citizens. Moreover, by following these recommendations, municipalities can effectively leverage AI technologies to improve governance and enhance the quality of life for their residents.

The main findings and the recommendations raised during these discussions are summarized in the following subsections.

4.1 "Artificial Intelligence in Local Governance: Prospects and Challenges" - Key Findings and Recommendations

4.1.1 Digital Transformation and AI Implementation in Local Governance

The discussion highlighted the significant strides made in digital transformation by municipalities. A key focus was on the development of digital tools and platforms designed to enhance public service delivery and citizen engagement. One municipality developed a mobile application, which allows residents to report issues, access information, and request services directly from their smartphones. This app, available on both Android and iOS platforms, facilitates direct communication between citizens and municipal authorities, streamlining service requests and improving responsiveness.

[1] https://ai4gov-project.eu/2024/01/03/parousiaseis-imeridas/

Other digital initiatives included an online appointment booking system to reduce waiting times at municipal offices, an e-services portal that centralizes all digital services offered by the municipality, and the implementation of electronic payment systems for municipal fees. Additionally, a bike rental application, was developed to simplify the process of renting public bicycles. Efforts were also made to address the management of stray animals through a dedicated website, promoting adoption and organizing volunteer efforts.

These initiatives demonstrate a strong commitment to leveraging technology to improve public services and enhance citizen engagement, making daily interactions with municipal services more efficient and user-friendly.

4.1.2 Challenges and Ethical Considerations

A critical theme of the discussion was the potential impacts and challenges of AI in public administration. While AI can significantly improve efficiency and automate processes, several important issues need to be addressed. The effectiveness of AI systems heavily relies on the quality and comprehensiveness of the data used for training. The lack of systematic codification of legislation in Greece, for example, hinders the development of reliable AI models. Ensuring the protection of personal data was also emphasized as paramount. AI systems must be designed to comply with data protection regulations and avoid unauthorized use of personal information.

Transparency and accountability were identified as crucial elements for public sector AI applications. AI systems should be publicly available for scrutiny to ensure they operate without biases and uphold ethical standards. There was a strong call for developing AI models that are transparent and can be audited to ensure they do not make decisions based on biases that could lead to discrimination. This includes ensuring diversity in data and continuously monitoring AI decisions.

4.1.3 AI in Tourism Policy and Management

The application of AI in tourism policy was another key topic. The municipality of Vari-Voula-Vouliagmeni, characterized by its extensive coastline and high-quality tourist services, aims to develop data-driven policies to enhance tourism management. The focus was on using AI to monitor and analyze parking violations, predict areas with high violation rates, and optimize the allocation of municipal resources. In waste management, an AI system is being developed to track waste collection data, propose optimal collection routes, and potentially expand the "pay-as-you-throw" system. These initiatives aim to reduce operational costs, promote sustainable practices, and improve the overall quality of services provided to residents and visitors.

Success in these initiatives relies on the availability of reliable data from various sources, including the Ministry of Tourism and local data. The integration of AI tools is expected to improve policy design, enhance service delivery, and increase citizen satisfaction.

4.1.4 Recommendations

To enhance data management and quality, it is recommended to develop standardized frameworks for data collection and codification, especially in legislative areas, to support AI training and implementation. Ensuring that data used for AI applications is accurate, comprehensive, and representative of diverse populations is essential to minimize biases.

Promoting transparency and accountability in AI systems involves making AI algorithms and models used in the public sector publicly available for examination and validation. Implementing mechanisms to continuously monitor and evaluate AI systems is necessary to ensure they adhere to ethical standards and operate without biases.

Strengthening data protection measures is crucial. AI systems should comply with data protection regulations to safeguard personal information. Stakeholders should be educated on the importance of data privacy and the ethical use of AI technologies.

Addressing bias and discrimination in AI models requires training AI models using diverse datasets to prevent biases and discriminatory outcomes. Regular audits of AI systems should be conducted to identify and mitigate potential biases in decision-making processes.

Fostering community engagement and education means involving local communities and stakeholders in the development and implementation of AI initiatives. Educating citizens and municipal staff on the benefits, risks, and ethical considerations of AI is crucial to build trust and ensure the effective use of technology.

4.2 "Accessible and Inclusive Artificial Intelligence for Citizens" - Key Findings and Recommendations

4.2.1 Digital Access and inclusivity

The discussion highlighted the critical need for digital access and inclusivity in public services. Participants shared a poignant example of a man in the UK who faced significant challenges in accessing his entitled benefits due to digital barriers. This example underscored the importance of ensuring that digital platforms are user-friendly and accessible to all, regardless of their digital literacy levels. In Greece, similar issues were identified, with many citizens needing assistance to navigate digital platforms for accessing social benefits.

One key initiative discussed was the introduction of the "Minimum Guaranteed Income" in 2017, which aimed to provide a safety net for those in extreme poverty. Despite the sophisticated digital platform for these applications, a significant number of citizens still required in-person assistance to complete their applications. This disparity highlighted the necessity of community services that support citizens in accessing digital tools.

4.2.2 The Role of Community Centers

Community centers play a vital role in bridging the digital divide. These centers provide essential services, such as assisting with applications for various social benefits, including disability

allowances, housing benefits, and birth allowances. They also offer food distribution, counseling, and integration into other social programs. The panel emphasized the increasing importance of these centers as more services move online.

Moreover, community centers have been instrumental in offering psychological support, particularly in managing stress, which can be a barrier to learning new technologies. This support is not only crucial for older adults but also for younger people who may lack the confidence to use digital tools effectively.

4.2.3 Education and Training Programs

The need for ongoing education and training was a recurrent theme. Community centers and municipalities have initiated various programs to teach basic computer skills and digital literacy. For instance, there are initiatives aimed at training elderly citizens on the use of computers and mobile devices. Additionally, there are programs to help citizens understand and navigate digital government services.

For refugees and migrants, language barriers present an additional challenge. Programs have been developed to teach Greek to non-native speakers, helping them integrate into society and access digital services. These programs have been recognized for their effectiveness and have received accolades for their contribution to social inclusion.

4.2.4 Digital Transformation in Municipal Services

Municipalities have made significant strides in digital transformation. Efforts include developing applications for reporting issues like potholes and fallen trees, as well as platforms for managing urban planning information. These digital tools aim to improve efficiency and make it easier for citizens to interact with municipal services.

One notable project is the creation of a digital assistant that can handle frequently asked questions from citizens, reducing the burden on municipal staff and improving service delivery. This tool uses AI to provide accurate and timely information, enhancing the overall user experience.

4.2.5 Challenges and Ethical Considerations

The panel also discussed the challenges and ethical considerations of implementing AI in public services. Ensuring data privacy and protection is paramount, especially when dealing with sensitive personal information. There is also a need to address biases in AI algorithms to prevent discrimination and ensure fairness in decision-making processes.

Participants highlighted the importance of transparency and accountability in AI systems. Public sector AI applications should be designed to be transparent, with clear explanations of how decisions are made. This transparency helps build trust among citizens and ensures that AI is used ethically and responsibly.

4.2.6 Youth Engagement and Digital Skills

Engaging the youth and enhancing their digital skills was another significant focus. Municipal youth councils have been established to involve young people in local governance. These councils provide a platform for young citizens to voice their concerns, propose solutions, and participate in decision-making processes.

Youth councils have also embraced digital tools to facilitate their activities. For example, e-petitions and live chat platforms have been introduced to gather input from young people and address their concerns in real-time. These tools help ensure that the voices of young citizens are heard and considered in municipal policies

4.2.7 Recommendations

To enhance digital access and inclusivity, it is recommended to develop more user-friendly digital platforms and provide comprehensive support services for those who need assistance. Community centers should be strengthened to offer a broader range of digital literacy programs and support services.

Ensuring transparency and accountability in AI systems is crucial. Public sector AI applications should be designed with clear explanations of decision-making processes and mechanisms for regular auditing and monitoring to prevent biases and ensure fairness.

Ongoing education and training programs are essential to equip citizens with the necessary digital skills. These programs should be tailored to meet the needs of different demographic groups, including elderly citizens, refugees, and migrants.

Youth engagement should be a priority, with continued support for youth councils and the development of digital tools that facilitate their participation in local governance. Providing young people with opportunities to contribute to decision-making processes helps build a more inclusive and responsive local government.

5 2nd and 3rd Panel Discussions

In June 2024 the AI4Gov partners organized and participated in two discussion panels in Ljubljana, Slovenia, within two different events – international conferences, one in the domain of healthcare and medicine, and the other in the domain of law and regulation:

The 2nd discussion panel took place during the international conference in Ljubljana: "Dialogues in Neurodegenerative Disorders: Care, communication and biomedical challenges" (Neurocare)[2], 6th - 7th June 2024. The AI4Gov partners (JSI and UPRC) organized a panel discussion titled "Rethinking Healthcare with Digital Health Technology," where AI in healthcare and trustworthiness were the main focus of the discussion.

The 3rd discussion panel was organized under the international conference titled "Global Conference on AI And Human Rights"[3], which took place at the Faculty of Law, University of Ljubljana, 13th and 14th June 2024, organized under the patronage of UNESCO. Specifically, the AI4Gov discussion panel was held after panel 3 on the first day of the conference, which was titled "AI and governance". After the presentations of the invited speakers the floor was open for a discussion between the speakers and the audience. Speakers received questions from the panel chair (former Slovenian Minister for Public Administration) and from the audience. There were five panelists from different domains: an AI researcher, a social sciences researcher, an UNESCO representative, a researcher from the domain of human rights and democracy, and a researcher from the domain of law. The audience was mixed, most representatives being from the domain of law and regulation, but also from education, policy institutions and also some from the industry.

The discussion brought to light several critical issues and considerations regarding the integration of AI in various aspects of society, with a particular focus on governance, bias, discrimination, transparency, inclusivity, and democratic participation.

5.1 2nd Panel Discussion - Rethinking Healthcare with Digital Health Technology: Key findings

The panel discussion underscored the transformative potential of AI in enhancing public services and healthcare delivery. However, realizing this potential requires addressing regulatory, ethical, and educational challenges. By following the recommendations outlined in this report, stakeholders can ensure that AI technologies are implemented in a manner that is safe, effective, and inclusive, ultimately benefiting all citizens. More specifically the points raised were:

- Enhancement of Regulatory Frameworks: Develop comprehensive regulatory frameworks that ensure AI tools used in healthcare are certified for accuracy and reliability. These frameworks should be dynamic to keep pace with rapid technological advancements.

[2] https://www.neurocare.si/
[3] https://www.ai-right-to-life.si/en/2014-conference

- Promotion of Transparency and Explainability: Implement AI systems that offer clear explanations of their decision-making processes. This transparency builds trust among users and facilitates wider adoption of AI tools in critical areas like healthcare.
- Strengthening Ethical and Privacy Protections: Ensure that AI applications comply with stringent data protection regulations. Develop AI tools specifically for medical use, validated through rigorous testing to ensure their safety and reliability.
- The Need to Improve Digital Literacy: Invest in training programs for healthcare professionals to enhance their understanding of AI. Similarly, develop initiatives to increase patients' digital literacy, enabling them to engage effectively with AI-driven healthcare solutions.
- Fostering Critical AI Literacy: Encourage the development of critical AI literacy to help users understand the strengths and limitations of AI. This education is crucial for professionals who rely on AI for decision-making, ensuring they can use these tools responsibly and effectively.
- Ensuring Inclusive AI Applications: Design AI systems with accessibility and inclusivity in mind to ensure they meet the needs of all citizens, particularly marginalized and vulnerable populations. This approach helps in addressing inequalities and enhancing the overall effectiveness of public health and social services.

5.1.1 AI in Healthcare and Regulatory Challenges

The discussion emphasized the increasing integration of AI in healthcare and the regulatory challenges that accompany this trend. AI tools are being used for various purposes, such as predicting medical outcomes, diagnosing diseases, and managing administrative tasks. However, the deployment of these tools requires stringent regulation to ensure their safety and effectiveness. AI models used in medicine need to be certified to guarantee they meet specific accuracy and reliability standards. This certification process is crucial because medical solutions are classified as high-risk applications under the AI Act, necessitating external evaluation and stringent oversight.

5.1.2 Transparency and Trust in AI Systems

A significant concern discussed was the need for transparency and trust in AI systems, especially in medical contexts. Participants highlighted that while AI can assist in diagnostic processes, the final decision should always rest with a human (healthcare expert). This ensures that AI serves as a supportive tool rather than a replacement for human judgment. The importance of explainable AI was stressed, where the AI system’s decision-making process is transparent and understandable to its users, particularly healthcare professionals. This transparency helps in building trust among users and ensures that AI tools are adopted more widely and effectively.

5.1.3 Impact of AI on Doctor-Patient Relationship

The panel discussed the potential impact of AI on the doctor-patient relationship. There is a concern that doctors might become too reliant on AI systems without fully understanding their underlying mechanisms. This reliance could undermine the doctor-patient relationship if not managed properly. Ensuring that doctors are well-informed about how AI tools work and also about their limitations is crucial. This knowledge empowers them to use AI effectively while maintaining their critical role in patient care.

5.1.4 Ethical and Privacy Concerns

Ethical and privacy concerns were prominent in the discussion. The use of AI in healthcare involves handling sensitive personal data, which must be protected to comply with data protection regulations like GDPR. There was a debate on the appropriateness of using general AI tools, such as ChatGPT, for medical diagnostics due to concerns about data privacy and the accuracy of the information provided by such tools. Participants stressed the need for AI tools specifically designed and validated for medical use to ensure they provide reliable and safe outcomes.

5.1.5 Digital Literacy and Training

The panel highlighted the importance of digital literacy and ongoing training for both healthcare professionals and patients. Educating healthcare professionals about AI and its applications can help them integrate these tools into their practice effectively. Similarly, increasing patients' digital literacy ensures they can understand and engage with AI-driven healthcare solutions. This dual approach helps in maximizing the benefits of AI while mitigating risks associated with its use.

5.1.6 AI's Role in Public Health and Social Services

AI's potential in public health and social services was also discussed. AI can enhance the efficiency of these services by automating routine tasks, analyzing large datasets for public health insights, and providing personalized care recommendations. However, the integration of AI in these areas must be done thoughtfully to ensure it addresses the needs of all citizens, including marginalized and vulnerable populations. Ensuring accessibility and inclusivity in AI applications is critical to avoid exacerbating existing inequalities.

5.1.7 Critical AI Literacy

Developing critical AI literacy among users was deemed essential. Understanding the capabilities and limitations of AI helps users make informed decisions and use these tools effectively. This literacy is particularly important for those in decision-making roles, such as doctors and policymakers, who need to critically assess AI tools and their outputs.

5.2 3rd Panel Discussion – AI and Governance

The discussion during the conference highlighted several major findings:

- First, there is a need for adaptable regulations to prevent the misuse of AI and ensure its ethical implementation.
- Second, continuous and multidisciplinary education is crucial for understanding and responsibly handling of AI.
- Third, safeguarding digital rights is essential to empower users and maintain trust in AI systems. Fourth, ensuring AI systems are transparent and explainable is necessary to prevent biases and foster inclusivity.
- Lastly, raising public awareness and involving the public in AI decision-making processes are vital for aligning AI developments with democratic principles and societal values.

5.2.1 AI in Governance

The conference underscored the importance of ethical impact assessments, illustrated by a pilot project in Chile focused on social security and pensions. This project highlighted the need for training authorities to ensure they are competent in using AI tools effectively. The discussion also touched upon the manipulation of political data and elections through algorithms and computational propaganda. Notable instances, such as the 2016 US elections and Brexit, serve as stark reminders of how AI can be used to polarize societies. To address these challenges, there is a pressing need for regulations that can swiftly adapt to the fast-paced advancements in AI technology.

5.2.2 Bias and Discrimination

One of the major concerns discussed was the potential for AI to perpetuate bias and discrimination. The impact of biases, deepfakes, and disinformation in critical sectors such as healthcare and justice were emphasized. The conference highlighted the importance of multidisciplinary education and continuous learning to predict and understand the impact of AI, which is essential for addressing these biases effectively.

5.2.3 Transparency and Inclusivity

The conference identified five key dimensions of AI ethics: legal, socio-cultural, scientific/educational, economic, and technological/infrastructure. Understanding these dimensions is crucial for addressing the ethical implications of AI. Additionally, the discussion on digital rights emphasized the need for the right to be forgotten, anonymity, self-determination, and encryption to ensure user privacy and control. The challenge of making AI systems explainable across different levels of education was also highlighted. Ensuring transparency in AI systems is necessary to build trust and foster inclusivity.

5.2.4 Raising Awareness and Participation in Decision-Making and Democracy

Education was a recurring theme, with recommendations to integrate it closely with governance and human rights. Developing educational curricula that keep pace with technological advancements is vital for preparing both authorities and the general public for responsible AI use. Digital literacy programs for children and schools were emphasized as essential for fostering future generations capable of managing AI responsibly. The role of users, both critical and technical, in understanding and managing AI systems was also discussed. Furthermore, raising awareness about the impact of AI on democracy and encouraging active public participation in AI-related decision-making processes are crucial for ensuring that AI developments align with democratic values.

6 Existing Awareness Strategies

Awareness strategies to address AI discrimination and mitigation of bias are crucial for fostering a fairer and more equitable deployment of AI technologies. These strategies encompass a range of educational, policy-oriented, and technological approaches designed to identify, understand, and mitigate biases in AI systems. These strategies include educational programs and workshops, formulation of ethical guidelines and frameworks, conduct of regular bias audits and impact assessments, transparency and explainability in AI systems promotion by corresponding initiatives, encouraging diversity and inclusion within AI development teams, public awareness campaigns and collaborative initiatives between governments, academia, industry, and civil society. These strategies aim to create a comprehensive framework for understanding and mitigating AI bias, ensuring that AI technologies are developed and deployed in a manner that promotes fairness, inclusivity, and accountability. By continuing to expand and refine these strategies, stakeholders can work towards minimizing AI-driven discrimination and fostering a more equitable technological landscape.

6.1 Educational Campaigns

Educational initiatives are fundamental in raising awareness about AI discrimination and bias. Universities, research institutions, and organizations offer courses, workshops, and training programs aimed at AI developers, policymakers, and the general public. These programs focus on the ethical implications of AI, the sources of bias, and techniques for mitigating bias in AI systems. By enhancing understanding and skills, these educational efforts empower stakeholders to recognize and address bias effectively. To name some of these initiatives, the Oxford University and The Oxford Internet Institute offer courses on the ethical and governance aspects of AI, focusing on understanding and addressing biases in AI systems. The courses cover a wide range of topics, including the social implications of AI and strategies for mitigating bias. Delft University of Technology in the Netherlands offers a course on responsible innovation, which includes modules on AI ethics and fairness. The University of Edinburgh offers a course that explores the impact of AI on society, including issues of fairness, bias, and discrimination. There are also workshops and training sessions organized by various institutions and tech companies focusing on identifying and mitigating biases in AI systems and covering best practices for ensuring fairness and transparency in AI applications such as the ETH Zurich – AI Ethics Lab, SAP (German software technology company), Google and Microsoft.

6.1.1 Public Awareness Campaigns

Public awareness campaigns play a vital role in educating society about the potential risks and biases associated with AI. These campaigns utilize various media platforms to disseminate information, highlight real-world examples of AI bias, and promote informed discussions on the ethical use of AI. By raising public consciousness, these campaigns encourage a collective effort

to advocate for fair and unbiased AI systems. Two prominent examples of public awareness campaigns are the Algorithmic Justice League (AJL) which was designed to raise awareness about the social implications of AI bias through advocacy, art, and research, and the AI for Good Global Summit which was organized by the International Telecommunication Union (ITU) and XPRIZE with the aspiration to bring together AI innovators, ethicists, and policymakers to discuss and address the ethical challenges of AI, including bias and discrimination.

6.1.2 Social Media

To effectively address AI discrimination and mitigate bias on social media, a multi-faceted approach is required. Awareness strategies should focus on educating both developers and users about the inherent biases that AI systems can perpetuate. Training programs for AI developers and educational campaigns for users can increase awareness of how AI-driven content recommendations might reinforce existing biases. Transparency in AI algorithms is crucial; platforms should disclose how their AI systems function and the data they utilize, enabling independent audits and public scrutiny (Binns, 2018).

Social media platforms can implement features that allow users to understand why certain content is being recommended, promoting greater transparency. Additionally, platforms should employ bias detection tools that continuously monitor AI systems for discriminatory patterns and adjust algorithms to minimize bias (Gillespie, 2020).

There are several awareness campaigns and initiatives currently active to address AI discrimination and mitigate bias on social media such as Reclaim Your Face, a European civil society initiative which aims to ban biometric mass surveillance. It focuses on raising awareness about the misuse of facial recognition technology and other AI systems that can perpetuate discrimination and bias. The campaign involves a coalition of over 60 organizations advocating for stronger regulations to protect fundamental rights and ensure transparency in AI applications (D-CENT). Another example of an initiative to address discrimination on social media was implemented by the social media platform Facebook. In response to concerns about racial bias in its ad targeting algorithms, Facebook conducted a civil rights audit. This audit led to changes in how the platform handles targeted advertising to minimize discrimination based on race and ethnicity. The audit is part of broader efforts to increase transparency and accountability in AI-driven ad targeting (Brookings, 2021).

These campaigns and initiatives are crucial in promoting transparency, accountability, and fairness in AI systems, particularly those used on social media platforms. They highlight the importance of diverse and inclusive datasets, ethical AI design, and the active involvement of civil society in shaping AI policies and practices.

6.1.3 Interventions in Educational Institutions

Several educational institutions have designed interventions to promote the mitigation of bias and discrimination in AI. These initiatives cover a wide range of activities such as implicit bias

training programs for students and faculties and incorporating modules on bias in data science and machine learning courses. Other activities included development of collaborative research projects with industry and the government to conduct research on AI bias, development of collaborations with policymakers to promote regulations and standards that address AI bias, as well as promoting diversity by encouraging the recruitment and support of underrepresented groups in AI fields, thus ensuring diverse perspectives are included in the development of AI technologies.

Here are some notable examples: The Leverhulme Centre for the Future of Intelligence (CFI) at the University of Cambridge runs the "AI: Ethics and Society" research program which specifically investigates the ethical challenges posed by AI, including bias and discrimination. The Institute for Ethics in Artificial Intelligence at the Technical University of Munich - amongst its other initiatives regarding the development of skills to identify and mitigate bias in AI systems- has developed an interdisciplinary approach which ensures that ethical considerations are integrated into AI research and development processes. The Centre for Digital Ethics and Policy at UCL conducts research and provides education on the ethical challenges of digital technologies, including AI. Carnegie Mellon University's AI Ethics and Society Initiative integrates ethical considerations into AI education and research. The initiative offers interdisciplinary courses that address bias in AI and promote the development of fair and accountable AI systems. CMU also conducts research projects aimed at understanding the root causes of AI bias and developing methods to reduce it.

6.2 Policies and Regulations

Recent policies and regulations have been designed to address and mitigate bias and discrimination in AI. In the United States, significant steps have been taken under the Biden-Harris Administration to ensure responsible AI development. A key initiative is the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, signed in October 2023. This Executive Order establishes new standards for AI safety and security, with specific directives for federal agencies to protect privacy, advance equity, and mitigate bias in AI systems. It emphasizes the need for transparency and accountability in AI deployment and promotes international collaboration on AI governance to address global challenges associated with AI technologies.

Additionally, federal agencies such as the Federal Trade Commission (FTC), the Department of Justice (DOJ), the Equal Employment Opportunity Commission (EEOC), and the Consumer Financial Protection Bureau (CFPB) have issued a joint statement pledging to increase enforcement efforts against bias in automated systems. This joint statement highlights the potential for AI systems to perpetuate unlawful bias and discrimination and reiterates the application of existing legal authorities to these technologies. The statement underscores the importance of using representative and balanced datasets to prevent skewed outputs and illegal discrimination.

In Europe, the European Union (EU) is also actively addressing AI bias through the proposed AI Act, which aims to regulate high-risk AI systems. This legislation mandates rigorous testing, documentation, and oversight to ensure AI systems are transparent, non-discriminatory, and respectful of fundamental rights. The AI Act also establishes a risk management framework for AI applications, requiring regular assessments to identify and mitigate potential biases and discriminatory outcomes.

Both the U.S. and EU approaches emphasize the need for comprehensive frameworks that integrate ethical considerations into AI development and deployment. These efforts reflect a broader commitment to fostering fair, inclusive, and accountable AI systems that safeguard individuals' rights and promote social equity.

6.3 Corporate Initiatives

Several leading tech companies have taken proactive steps to address and mitigate bias in their AI systems. These initiatives range from developing ethical guidelines and tools to fostering diverse and inclusive work environments. These corporate initiatives highlight the commitment of leading tech companies to address and mitigate bias in AI. By developing ethical guidelines, creating fairness-focused tools, and fostering diverse and inclusive environments, these companies are working to ensure that AI technologies are fair, transparent, and accountable. Such efforts are essential for building trust in AI systems and promoting their responsible use across various applications.

6.3.1 Strategies of Addressing AI bias Internally

There are corporations that have demonstrated a commitment to addressing AI bias in their activities through comprehensive strategies that involve regular testing, transparency, ethical guidelines, and promoting diversity within their AI development teams. Their efforts contribute to the broader goal of developing fair and trustworthy AI systems.

For example, Microsoft (https://www.microsoft.com/en-us/ai/principles-and-approach/) and Google (https://ai.google/responsibility/responsible-ai-practices/) have published extensive guidelines on the responsible use of AI, highlighting the importance of ethical considerations in AI development. Both of them advocate for transparency, fairness, and accountability, and have implemented practices to test and mitigate bias in their AI systems.

IBM has, also, been at the forefront of advocating for and implementing measures to mitigate AI bias. They have developed a comprehensive policy framework that emphasizes accountability, transparency, fairness, and security (https://www.ibm.com/impact/ai-ethics). IBM calls for regular bias testing, documentation of assessment processes, and ongoing monitoring of high-risk AI systems. They also promote AI literacy and diversity in AI development teams to reflect a broader range of perspectives and minimize bias.

Another example is Deloitte which has developed tools and techniques to detect and remediate bias in AI systems. They train their AI developers to recognize and address bias and promote

transparency by explaining how AI algorithms make decisions. Deloitte's approach includes integrating control structures and processes to manage the risks associated with AI bias, fostering an ethical AI development environment. (https://www.deloitte.com/global/en/about/story/purpose-values/commitment-to-responsible-business-practices.html)

6.3.2 Examples of Corporate Responsibility in AI Ethics

Google has established a set of AI principles that emphasize fairness, transparency, and accountability. These principles guide the company's AI development and deployment, ensuring that AI systems do not perpetuate bias or discrimination. They also developed the What-If Tool, a visual interface that helps AI developers analyze their machine learning models. The tool allows users to explore model performance across different data subsets, identify potential biases, and make adjustments to mitigate them.

Microsoft in cooperation with several companies and academic institutions has, also, participated in a community driven project to introduce an open-source toolkit, Fairlearn, which is designed to help developers assess and improve the fairness of their AI models. Fairlearn provides tools to visualize and mitigate disparate impacts, promoting fairer AI outcomes. (https://fairlearn.org/)

Another example is IBM's AI Fairness 360, an open-source library that provides metrics to check for bias in datasets and machine learning models. It also includes algorithms to mitigate identified biases, helping developers create fairer AI systems. (https://aif360.res.ibm.com/)

Social media have also launched tools to address exclusion and discrimination such as Facebook (Meta). Facebook has launched the Inclusive AI program, which focuses on building AI systems that work fairly across diverse populations. This initiative includes efforts to collect diverse datasets and develop algorithms that perform well for all users. They also developed Fairness Flow; an internal tool used to evaluate the fairness of machine learning models. The tool helps engineers identify and mitigate biases during the development process, ensuring more equitable outcomes.

Finally, Amazon has initiatives to ensure that its AI systems are trained on diverse and representative datasets. This helps reduce biases that can arise from homogeneous data.

7 Developing Effective Workshops

As presented in previous sections of this report, there were three panel discussions conducted on AI and governance which provided the project with insightful findings and recommendations on topics such as digital transformation, AI implementation in local governance, challenges and ethical considerations, and inclusivity in AI for citizens. Based on the experience of participating in and conducting such panel discussions, certain suggestions and recommendations regarding the structure and organization of effective workshops on AI and bias discrimination and mitigation have emerged.

Developing an effective workshop on awareness regarding bias and discrimination in AI requires a well-structured approach that combines theoretical knowledge with practical exercises. Some guidelines have to be followed to ensure the workshop is impactful and informative.

- Define clear objectives such as awareness, identification, mitigation and ethics and fairness.
- Develop a comprehensive agenda which must include an introduction to AI bias, definition of key concepts such as bias, discrimination, fairness, and ethics in the context of AI and provide to the participants case studies highlighting incidents of AI bias and their consequences.
- Include in the workshop interactive sessions and hands-on exercises where participants can work with datasets and AI models to identify and address biases. Use tools like Google's What-If Tool or IBM's AI Fairness 360. Also, facilitate small group discussions to explore different types of biases and their effects. Encourage sharing of personal experiences and insights. Include exercises that involve ethical decision-making scenarios, helping participants apply ethical principles in practical contexts.
- Incorporate diverse perspectives by inviting as guest speakers experts from diverse backgrounds, including ethicists, data scientists, and representatives from affected communities, to share their perspectives on AI bias and discrimination. Organize panels to discuss ethical dilemmas and best practices for promoting fairness in AI.
- Provide educational resources such as reading materials, key documents of regulatory and legal framework, such as GDPR and the EU AI Act, and ethical guidelines from companies like Google and Microsoft.
- Include feedback mechanisms towards the end of the workshop. Collect feedback from participants through surveys and discussions to understand the workshop's effectiveness and areas for improvement.
- Create a safe and inclusive environment by ensuring that the workshop environment is inclusive and respectful, encouraging open dialogue and diverse viewpoints. Offer support for participants who might find the discussions around bias and discrimination personally challenging.

7.1 Workshop Objectives

As mentioned before, an effective workshop on bias and discrimination in AI should have clear and comprehensive objectives to ensure participants gain a deep understanding of these issues and are equipped to address them in their work.

Objective No. 1. Raise Awareness of AI Bias and Discrimination

- Understanding Bias: Educate participants on the various types of bias (e.g., cognitive bias, data bias, algorithmic bias) and how they manifest in AI systems.
- Impact on Society: Highlight the real-world implications of AI bias and discrimination on different communities, especially marginalized and underrepresented groups.

Objective No. 2. Identify Sources and Types of Bias

- Data Bias: Teach participants how biases in training data can lead to biased AI outcomes. Discuss examples where data collection, selection, or labelling introduced bias.
- Algorithmic Bias: Explain how algorithmic design choices and model selection can perpetuate or amplify biases. Provide case studies illustrating these issues.

Objective No. 3. Develop Skills to Detect and Mitigate Bias

- Bias Detection: Introduce tools and techniques for identifying bias in datasets and AI models, such as fairness metrics and bias detection algorithms.
- Bias Mitigation Strategies: Provide practical strategies for mitigating bias, including data augmentation, re-sampling, algorithmic adjustments, and fairness-aware machine learning techniques.

Objective No. 4. Foster Ethical and Responsible AI Development

- Ethical Principles: Promote understanding of key ethical principles in AI, such as fairness, accountability, transparency, and inclusivity.
- Regulatory Compliance: Ensure participants are aware of relevant laws and regulations, such as GDPR in Europe and the AI Bill of Rights in the US, and their implications for AI development and deployment.

Objective No. 5. Encourage Critical Thinking and Ethical Decision-Making

- Scenario Analysis: Engage participants in analyzing ethical dilemmas and decision-making scenarios involving AI bias and discrimination.
- Discussion and Reflection: Facilitate discussions that encourage participants to reflect on their own biases and the ethical implications of their work.

Objective No. 6. Promote Diversity and Inclusion in AI Development

- Inclusive Practices: Highlight the importance of diverse and inclusive teams in AI development and the role they play in mitigating bias.
- Case Studies: Present successful case studies where diverse teams and inclusive practices led to more equitable AI outcomes.

Objective No. 7. Facilitate Collaboration and Knowledge Sharing

- Networking Opportunities: Create opportunities for participants to connect and collaborate with each other, fostering a community of practice around ethical AI.
- Ongoing Support: Offer follow-up sessions, online forums, or mentorship programs to support participants in their ongoing efforts to address AI bias and discrimination.

7.2 Target Audiences

When organizing a workshop to train and educate on AI discrimination and bias mitigation, it is essential to include a diverse array of target audiences to ensure comprehensive understanding and effective solutions. The primary target audiences should include:

AI Developers and Data Scientists: These are the individuals who design, build, and maintain AI systems. Training them on recognizing and mitigating bias is crucial, as they directly influence the creation of algorithms and the selection of training data (Binns, 2018).

Policy Makers and Regulators: Government officials and regulatory bodies play a critical role in establishing guidelines and laws that govern AI use. Educating them on AI discrimination helps in forming policies that promote fairness and accountability (Fung, 2006).

Social Media Platform Executives and Managers: Decision-makers in social media companies need to understand the impacts of AI bias on their platforms. Their involvement ensures that corporate policies align with ethical AI practices and support unbiased content moderation.

Civil Society Organizations and Advocacy Groups: Organizations that advocate for human rights and digital equity should be included to ensure the voices of marginalized communities are heard. These groups can provide valuable insights and push for inclusive AI practices.

Academic Researchers and Educators: Scholars and educators who study AI ethics and bias can contribute their research findings and help develop educational materials that raise awareness and understanding of AI discrimination (Noble, 2018).

Journalists and Media Professionals: As influencers of public opinion, journalists and media professionals should be educated on AI bias to accurately report on related issues and raise public awareness.

General Public and End-Users: Including everyday users of AI-driven platforms ensures that they are aware of potential biases and their rights. Educated users can better advocate for fairer AI systems and contribute to the discourse on ethical AI.

By engaging these diverse groups, the workshop can foster a holistic approach to addressing AI discrimination, ensuring that multiple perspectives are considered and that the resulting solutions are robust and inclusive.

7.3 Workshop Content

A workshop designed raise awareness about bias and discrimination in AI systems should have defined and clear objectives on which the structure and content of the workshop is based. This structure should ensure a comprehensive and interactive approach to understanding, detecting, and mitigating bias in AI. By combining theoretical knowledge with practical exercises and discussions, participants will be well-equipped to promote fairness and ethical practices in AI development.

7.3.1 Introduction to AI and Machine Learning.

Definition of AI and Machine Learning, Key Concepts in Machine Learning, Model Building and Evaluation

7.3.2 Identifying Sources of Bias in AI.

Overview of AI Bias: Define AI bias and discrimination, types of bias (data bias, algorithmic bias, societal bias), and their sources.

Impact on Society: Discuss the societal implications of AI bias using case studies from various domains such as healthcare, criminal justice, hiring, and finance.

Data Bias: Explain how data collection, selection, and labeling can introduce bias. Provide examples and interactive exercises to identify bias in datasets.

Algorithmic Bias: Discuss how biases can be introduced through algorithm design and deployment. Include case studies and hands-on exercises to detect biases in AI models.

7.3.3 Techniques for Mitigating Bias in AI Systems.

Data-Level Mitigation: Techniques such as data augmentation, re-sampling, and synthetic data generation.

Algorithm-Level Mitigation: Fairness-aware algorithms, re-weighting, and adversarial debiasing.

Practical Exercises: Interactive sessions where participants apply these techniques to mitigate bias in sample datasets and models.

Introduction to Bias Detection Tools: Present and demonstrate tools such as IBM's AI Fairness 360, Microsoft's Fairlearn, and Google's What-If Tool.

7.3.4 Ethical Considerations in AI Development.

Ethical Principles and Frameworks: Discuss ethical principles such as fairness, accountability, transparency, and inclusivity. Reference guidelines from organizations like the IEEE, European Union, and other ethical frameworks.

Legal and Regulatory Frameworks: Overview of relevant laws and regulations such as GDPR, the AI Act, and the US Executive Order on AI.

Compliance Strategies: How to ensure AI systems comply with legal and regulatory requirements.

7.3.5 Hands-on Activities and Case Studies.

Hands-On Exercises: Provide practical sessions where participants use these tools to analyze datasets and models for bias.

Case Studies: Analyze ethical dilemmas and decision-making scenarios involving AI bias and discrimination.

Group Projects: Collaborative exercises where participants work in teams to identify, analyze, and mitigate biases in AI systems.

Presentations: Each team presents their findings and solutions, followed by group discussions and feedback.

8 Conclusions

The focus groups and panel discussions conducted under Task 5.1 of WP5 in the AI4Gov project have underscored several critical findings regarding AI bias and discrimination. These activities highlighted that AI bias can manifest in various domains, such as healthcare, governance, and public service delivery, impacting marginalized and vulnerable populations disproportionately. The discussions emphasized the need for ethical and transparent AI technologies to foster inclusiveness and mitigate discrimination.

Key recommendations from these discussions include the following:

Develop Comprehensive Evaluation Frameworks: Create robust frameworks that consider the purpose, stakeholder input, and context of AI applications. Incorporate key performance indicators (KPIs) to track the impact of AI projects on sustainable development goals (SDGs) and ethical considerations.

Enhance Bias Mitigation Strategies: Redesign evaluation forms and implement established ethics frameworks to address biases effectively. Regular bias audits and the use of diverse training data are crucial for mitigating biases during AI development.

Promote Transparency and Accountability: Ensure AI algorithms and models are publicly available for scrutiny and validation. Continuous monitoring and evaluation of AI systems are necessary to ensure they adhere to ethical standards and operate without biases.

Foster Community Engagement and Education: Involve local communities, businesses, and NGOs in AI decision-making processes to enhance transparency and accountability. Educating stakeholders on the benefits and risks of AI promotes informed participation and trust in AI technologies.

Ensure Ethical and Legal Compliance: Prioritize data privacy and prevent discrimination through comprehensive data characterizations and anonymization. Compliance with data protection regulations is essential to safeguard personal information.

Balance Automation with Human Oversight: Use AI to support decision-making with real-time data and insights, but ensure final decisions are made by humans to maintain ethical and contextual appropriateness.

Provide Training and Support: Equip stakeholders with the necessary skills to use AI platforms effectively and responsibly. Training programs should be tailored to meet the diverse needs of different demographic groups, including elderly citizens, refugees, and migrants.

To translate these recommendations into actionable steps, the workshops developed under WP5 will have to focus on enhancing understanding of AI bias, its societal impacts, and promoting ethical practices in AI development and deployment. These workshops will incorporate both theoretical knowledge and practical exercises, such as using tools to identify and mitigate bias in AI models. By engaging diverse participants, these workshops aim to cultivate a well-informed public capable of actively participating in shaping ethical AI frameworks.

Ultimately, this document serves as a foundational resource for developing strategies to raise awareness on ai issues and creating workshops that not only educate but also empower citizens to advocate for ethical AI practices. By implementing these recommendations, stakeholders can develop and deploy AI technologies that are fair, inclusive, and beneficial to all citizens, contributing to a more equitable technological landscape.

As the project progresses, the lead partner AUTH and the collaborating partners under T5.1 have scheduled their next activities on organizing the next discussion panels. The analysed input from these activities will be developed in the next deliverable under T5.1, Deliverable D5.2 to be delivered in M24, that is 31st December 2024.

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