

Automated Decision-Making Systems and Discrimination

Understanding causes, recognizing cases,
supporting those affected

Documents for implementing a workshop



▶ Introduction

These workshop documents are one of the results of the project: AutoCheck – a Guide about Automated Decision-Making Systems for Equality Bodies. They are the basis of a workshop about the discrimination risks of automated decision-making (ADM) systems.

To use these materials and conduct a workshop on “Automated Decision-Making Systems and Discrimination”, you should meet one of the following requirements:

- a) You participated in a multiplier workshop as part of the AutoCheck project.
- b) You are familiar with discrimination risks through ADM systems as well as anti-discrimination work in Germany and have experience in implementing workshops.

In any case, we recommend reading the “Automated Decision-Making Systems and Discrimination” guidebook before conducting a workshop

The workshop is designed for employees of anti-discrimination offices in Germany. By building competencies in this increasingly important field, we hope to enable these employees to better recognize and assess risks to support those affected by discrimination.

The workshop material includes:

1. Workshop script (p. 3)
2. Print templates (p. 7)
3. Slides (incl. presentation notes)
4. The guidebook: Automated Decision-Making Systems and Discrimination

Framework and preparation:

The workshop is designed for 10 to 12 participants who ideally have experience in anti-discrimination counseling, and it is a face-to-face one-day event (not online).

To prepare for the workshop, please carefully read all the documents provided. Go through the workshop in detail and think about what you need for implementation and whether you have any open questions. Print out enough templates for the number of participants and prepare them according to the instructions. Also, prepare the moderation cards and pinboards in advance.

In addition, you will need the following materials:

- Beamer and laptop to present the slides
- Pinboard(s) incl. pins (alternatively, you could also use flip charts and stick the moderation cards instead of pinning them)
- Flip charts
- A sufficient number of flip chart markers (in different colors)
- A sufficient amount of moderation cards
- Pads and pens so participants can take notes
- Tape
- Timer

/ Workshop script and schedule:

| Time | Topic | Method | Material | Comments |
|--|---------------------------------------|--|---|--|
| 08:45 | Arrival | | Tape, marker, beamer Slide 1 | Preparation: Set up slide presentation, make sure all materials are ready. |
| 09:00 (10') | Start and introduction to the topic | Input | Slides 1-3 | Preparation: Publication: <i>Introduction</i> (p. 4). |
| 09:10 (20') | Round of introductions & expectations | 90 sec./person (12 persons: 18-20') | Slide 4 Flip chart: for questions (e.g., with a questions mark in the middle) Timer | |
| MODULE 1: Introduction to the topic and key terms | | | | |
| 09:30 (20') | Introduction to the topic | Line-up exercise | Slides 5-7 Space in the room | Important: Demonstrate where the scale in the room runs from and to. Give the participants a short time to position themselves at the right point. Then ask 2-3 people why they are standing at that point. |
| 09:50 (15') | Key terms - Introduction | Plenary | Slide 8 3 moderations cards: "Artificial Intelligence", "Automated Decision-Making Systems", "Algorithm"; moderation cards, pen, pins, pin-board, print template: 1.1 "Basic Terms": Definition - print out one time | Preparation: Publication: Chapter 1 <i>Basics and Key Terms</i> (S. 5). Goal: Participants should understand the topic of "ADM systems" in a simple way. A common understanding is developed by defining and discussing the most important terms. |
| 10:05 (10') | Key terms - Exercise | Groups of two | Slide 9 Print template: 1.2 Examples from everyday life - Print for each group of two, cut it up and put in an envelope. | Goal: Participants engage with the terms and think about them. Optional: Groups will each receive moderation cards to write down questions during the exercise. |

| | | | | |
|----------------|-------------------------------|---------|---|--|
| 10:15 (15') | Key terms – Discussion | Plenary | Slide 10 2 moderation cards: “rule-based”, “learning” | Note: During the discussion, be sure to connect the everyday examples to counseling: Credit checks, application processes, voice recordings during application processes (see publication p. 6-13). |
|----------------|-------------------------------|---------|---|--|

| | | | | |
|----------------|--------------|--|--|--|
| 10:30 (15') | <i>Break</i> | | | |
|----------------|--------------|--|--|--|

| | | | | |
|----------------|-------------------------------------|---|---|--|
| 10:45 (10') | ADM fields of application | Plenary, brainstorming Collect on flip chart | Slide 12 Flip chart (ADM fields of application), flip chart marker | Preparation: Publication: Chapter 4 <i>Fields of Application</i> (p. 14f). Note: This exercise is not about whether ADM systems are discriminatory. It is about general areas of application. |
| 10:55 (10') | Figure fields of application | Input | Slide 13 | Note: The focus of the publication is on private services and access to goods. Areas beyond this are only presented roughly – this also applies to slide 13. |

| MODULE 2 – Risks of discrimination through ADM systems | | | | |
|---|-------------------------------|--|--|---|
| Time | Topic | Method | Material | Comments |
| 11:05 (25') | Causes | Input | Slides 14-19 | Preparation: Publication: Chapter 3 <i>Causes</i> (p. 11). |
| 11:30 (20') | Causes – Understanding | Group work, thought experiment | Slide 20 Moderation cards, marker for each group | |
| 11:50 (20') | Causes – Discussion | Plenary: Presentation and discussion | Slide 21 Pinboard, “My new supervisor” moderation cards, pins | |
| 12:10 (10') | Solutions | Input | Slide 22 | |



12:20
(60')

Lunch break

Module 3 – Recognizing ADM Systems

| Time | Topic | Method | Material | Comments |
|----------------|---------------------------|-----------------|---|--|
| 13:20 (10') | Arrival | Plenary | Slide 24 | |
| 13:30 (10') | Recognize | Plenary | Slide 25 Print template 2.1: “Recognize” checklist – All participants receive a copy. Please print copies according to the number of participants. | Preparation: Publication: Chapter 5 <i>Recognize</i> (p. 16). |
| 13:40 (30') | Recognize – Exercise | Groups of three | Slides 26, 27 Print template 2.2: “Recognize” exercise: situation description – Each “person affected” receives the situation description. Please print out one for each group of three. Moderation cards with questions for groups of three | Note: The participants are experts in counseling. They should try to use their expertise and draw from their own experiences. Preparation: For each group of three, prepare moderation cards with questions from slide 27. |
| 14:10 (15') | Recognize – Discussion | Plenary | Slide 28 Pinboard, pins, moderation cards, flip chart marker | Preparation: Pinboard: “Recognizing ADM Systems in Counseling”. |

14:25
(15')

Break



| MODULE 4 – Handling ADM Cases | | | | |
|-------------------------------|--------------------------|---------------------------------------|--|---|
| Time | Topic | Method | Material | Comments |
| 14:40 (10') | Handling | Plenary | Slide 30 Print template 3.1: “Handling” checklist – All participants receive a copy; please print out enough for the number of participants. | Preparation: Publication: Chapter 6 <i>Handling</i> (p. 18). |
| 14:50 (35') | Handling – Exercise | Groups of three | Slides 31, 32 “Handling” checklist, moderation cards and marker for each group for documentation. Moderation cards with questions for groups of three | Prepare: For each group of three, prepare moderation cards with questions from slide 32. |
| 15:25 (25') | Handling – Discussion | Plenary, discussion Summary | Slide 33 Pinboard, moderation cards, pins, marker | Prepare: Pinboard: “Handling ADM Cases in Counseling” |
| 15:50 (10') | Outlook | | Slides 34, 35 Attachment 4: Postcards | Prepare: Please print out one postcard per participant. |
| 16:00 (20') | Networking | Plenary | Slides 36, 37 | |
| 16:20 (15') | Feedback | | Slide 38 Pinboard, pins, moderation cards, enough pens. | Prepare: Pinboard: “Feedback”, three moderation cards (“I liked ...”, “This could have gone better ...”, “I missed ...”). |
| 16:35 | Conclusion | Plenary | Slides 39, 40 | |

/ Print templates

1.1: “Basic Terms”: Definition

ALGORITHM

A specific form of instruction that leads to the solution of a mathematical problem in defined individual steps.

AUTOMATED DECISION-MAKING SYSTEMS (ADM Systems)

Algorithms execute decision models or decision paths automatically.

ARTIFICIAL INTELLIGENCE (AI)

A research field in computer science that deals with the automation of cognitive tasks. The general goal is to enable machines to perform tasks that somehow appear ‘intelligent’.

LEARNING ALGORITHM

First, the algorithm “learns” rules from existing data that point to the desired result. Then, the algorithm applies these learned rules to make decisions about unknown data of the same type. The deduced rules are usually not comprehensible to humans.

RULE-BASED ALGORITHM

Humans explicitly programmed the rules and instructions for actions that the algorithm executes. The rules are comprehensible to humans.

1.2: Examples from everyday life



ALGORITHM (RULE-BASED)



... are used to sort out the most suitable applications from a large pool of applications, e.g., according to the logic: If the applicant has “five years of professional experience”, then “invite them for an interview”.



... is used to calculate a person's creditworthiness based on certain criteria, such as residential address or age. These criteria are visible to developers.



KI



ALGORITHM (LEARNING)



... is used to find out something about the person speaking based on voice recordings.



... is used to determine the order of search results in an online search engine (e.g., Google). Over time, the order is adapted to previous search behavior.



... is used to detect patterns in photographs of human skin that indicate melanomas. This is supposed to happen before humans can detect these patterns.



ADM SYSTEMS

CHECKLIST “Recognize”

This checklist is intended to facilitate the recognition of indicators for ADM systems through asking appropriate questions.

- Did the interaction take place online?
- E.g., search via online portals, contracts concluded online, interactions with a chatbot.
 - HOWEVER: Credit checks by lenders, or video/voice recording made when applying for a job, are situations in which ADM systems can be applied, even if the interactions did not take place online.
- Was an online form filled out?
- Did an interaction via a contact form or chatbot take place?
 - Was personal information provided or personal data shared? If yes, what was shared?
 - Were questions asked about information that is protected by the General Equal Treatment Act (direct discrimination)? Were questions asked about information that could act as proxy variables¹ (indirect discrimination)?
 - Have any documents been uploaded? If yes, what documents? Do they contain any protected information?
- Is a decision made immediately when data is entered into an online form or is the decision communicated immediately afterwards by email?
- Were a lot of documents uploaded, yet the response still came very quickly?
- Do certain terms or phrases appear in the response that indicate an automated decision?
 - For example, a common phrase is “This letter was generated automatically and is valid without a signature”.
 - Common terms are: “automated”, “machine”, “computerized”, “automatic”, “electronic”.
- Was something purchased online? What payment options were available and which option was selected?
 - With installment, payment on account options or continuing obligation, a credit check is very likely performed.
- What is written in the General Terms and Conditions, the data protection agreement or similar documents?
 - Consent to a credit check?
 - Explicit consent to fully automated decisions based on data provided?²
 - Words and phrases like: “automated”, “machine”, “computerized”, “automatic”, “using algorithms”.

1 Proxy variables substitute other variables, for example, if those cannot be observed or measured directly. A synonym for the word “proxy” is “representative”. Proxy variables allow conclusions about certain – also protected – characteristics without recording those characteristics directly. For example, “30 years of work experience” indicates that the person must be at least in his or her mid-40s. Thus, proxy variables can have a decisive influence on the decisions of an ADM system.

2 In order for fully automated decisions to be made, the affected person must explicitly consent in accordance with Article 22 of the European Data Protection Act (GDPR) or Section 31 of the German Federal Data Protection Act.



1.3: “Recognize” exercise: Situation description

Situation description (for the person affected):

You contact the anti-discrimination counseling center with the following description:

“I wanted to buy clothes for myself and pay on account. However, I was told that this was not possible due to a credit check. I am 40 years old, have a steady job and I don’t have any negative entries with credit check companies. How is it possible that I could not pay on account? I have a hunch that it is because I am a woman. This is unbelievable!”

You mention the following information only when asked by the counselor:

- You wanted to buy the clothes in an online store.
- During the payment process you were able to select the option “purchase on account”. However, you were then told that you could not purchase on account due to a credit check.
- You were surprised and called the online retailer.
- The employee at the online retailer referred you to the respective credit check company because they calculated the score.
- You called them right away and the employee said: “Women your age are divorced and therefore destitute”.

Please take a moment to put yourself in the same situation:

Who are you? What has happened? Why are you going to the anti-discrimination office?

Feel free to fill out the role a little.

CHECKLIST “Handling”

The risk of discrimination through ADM systems is a relatively new problem in anti-discrimination counseling, and cases vary greatly depending on which ADM system is used. Currently, only a few cases from Germany exist. As a result, there is little empirical knowledge you can rely on. Therefore, if you suspect that an ADM system has been used, we recommend you contact one of the organizations listed below as a first step:

- AlgorithmWatch, info@algorithmwatch.org, +49 (0) 30-99 40 49 001
- Federal Anti-Discrimination Agency, beratung@ads.bund.de
- Anti-Discrimination Association Germany, info@antidiskriminierung.org

In addition, we suggest the following approaches for common interventions in anti-discrimination counseling:³

In general

- As in all other counseling cases, the first step is to find out what the person seeking counseling wants.
- Ideally, you should include a reference to an ADM system in the documentation of the counseling case:
 - To facilitate bundling these cases together to identify possible patterns;
 - To enable you to discuss them at networking meetings and decide on next steps, e.g., a testing procedure.

3 You can find further information in the AutoCheck publication, Chapter 5.

Contact, statement, letter of complaint

- If you suspect an algorithm or ADM system contributed to a discriminatory or unfair decision, describe this suspicion when contacting the organization.
- For example: “Based on some indications, we assume that an automated decision-making system was used in this case. By this, I mean that decision-making models were applied in an automated way by an algorithm or a computer program. Did you use such a system? If so, what software did you use? Did a fully automated decision take place or was the decision prepared in an automated manner and then made or controlled by a human? How was the automated system secured against discrimination and other unwanted influences? How was it ensured that no personal characteristics were used?”

Testing procedure

- The testing method is useful in the context of automated decisions since the decisions are always made according to the same basic pattern, i.e., systematically.
- Please be aware that testing procedures are often very time-consuming and demanding.
- The results of a testing procedure could have great potential when a statement is requested.
- There is little case law (outside of discrimination in the housing market) to indicate whether the results of such a testing procedure would be accepted as circumstantial evidence in court.



Creating visibility – public relations and press work:

- Since this is a relatively new topic, press and public relations work is important when a case occurs:
 - Publicizing the cases increases awareness about the topic and encourages public debate.
 - To help raise awareness about the topic at a political level.
 - To contribute to a clearer picture of the situation regarding the use of ADM systems and the associated risks.

Litigation and strategic litigation

- The affected person can take legal action. You need to consider that legal action entails costs and a burden for the person concerned, and resources are needed for the work done by the anti-discrimination counseling center.

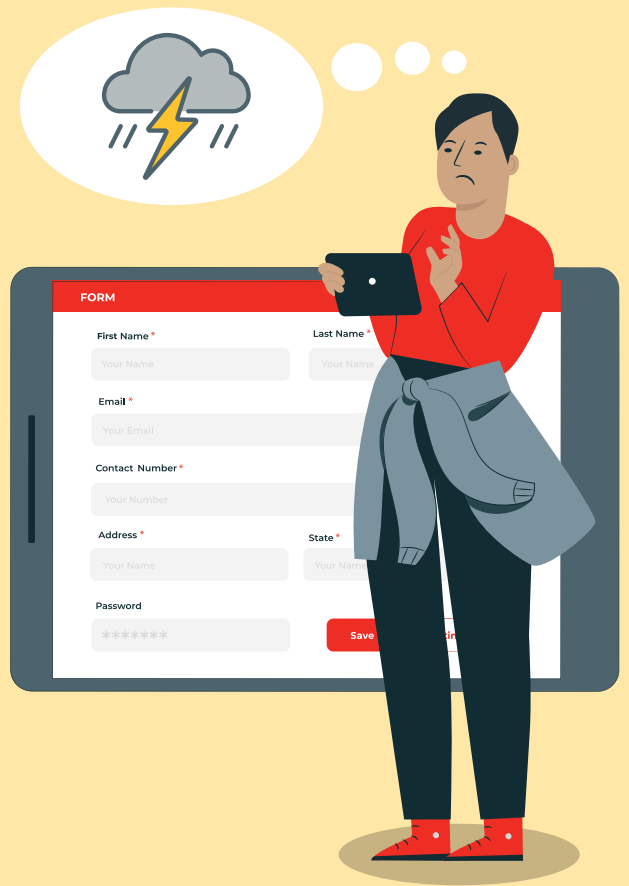
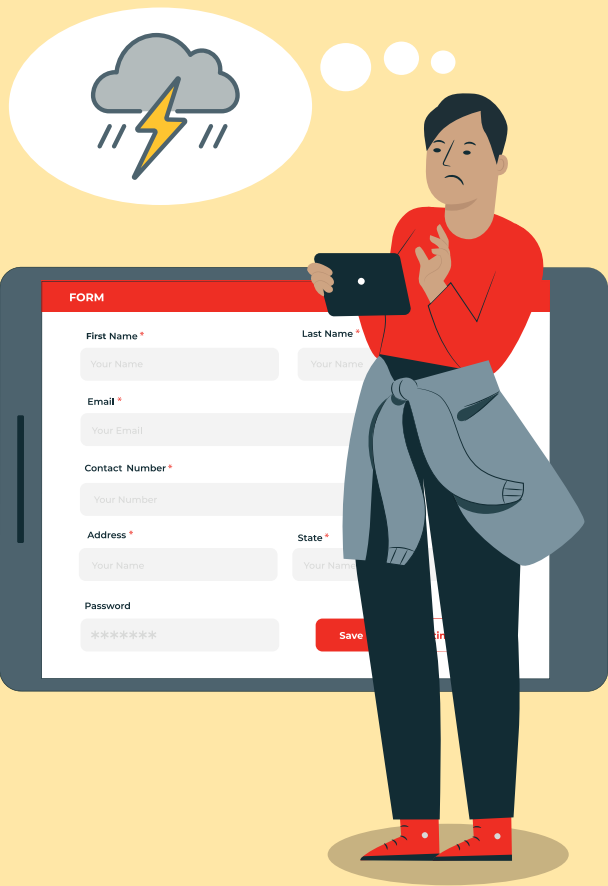
- If the person concerned decides to file a lawsuit and you are advising on the case, it is important to discuss with the legal representation to what extent attention can be drawn to the fact that the decision was (partially) automated. This could benefit the press and public relations work surrounding the case.
- Depending on the case and available resources, strategic litigation might be an option because automated decisions are systematic and often reproduce existing discriminatory structures.
- Since the widespread use of automated systems is a relatively new phenomenon, many legal questions are currently pending, e.g.:
 - Which role could data or consumer protection have in addition to, or in interaction with, the General Equal Treatment Act?
 - Which of the various draft laws that the European Union is currently negotiating, will be adopted? What influence do they have on anti-discrimination counseling?
 - Especially: The Artificial Intelligence Act and the Digital Services Act.

Artificial Intelligence Act

Currently, the Artificial Intelligence Act is being negotiated at the EU level. The law aims to regulate the use of AI systems, especially those that involve high-risk. The proposal establishes a legal framework designed to ensure the protection of fundamental rights while promoting innovation.

Digital Services Act (DSA)

EU institutions recently agreed on the final version of the DSA. It sets out new obligations for providers of digital intermediation services, especially for very large online platforms. These provisions are intended to promote a safer online environment in which people are able to exercise their fundamental rights online, including the right to non-discrimination. Specific provisions related to non-discrimination on platforms include rules that curb targeted advertising, revised reporting mechanisms, and new transparency and accountability measures. Services such as Facebook, Google, or Amazon are to assess whether they pose “systemic risks,” undergo audits, and make data available for research in the public interest.



Was tun, wenn Algorithmen diskriminieren?

Antworten finden Sie in dem Ratgeber „Automatisierte Entscheidungssysteme und Diskriminierung“



✉ info@algorithmwatch.org

Gefördert durch die



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Imprint

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