PROJECT REPORT. SEPTEMBER 2020

Background

Many cases of how AI-based technologies maintain and reproduce inequality caught much attention in research and practice lately. The justified focus on the dark side of AI may cause reluctance towards exploring how AI-based technologies can be applied to increase gender equality. This report aims to address the lack of systematic knowledge and innovation how AI can contribute to increase gender equality targeting five specific areas.

Method

Twelve expert interviews, one global, three local workshops, and desk research were conducted within the framework of five identified gender equality issues: gender-related violence (1), health inequalities (2), pay gap (3), unpaid work (4) and uneven funding (5).

Key Findings

Key opportunities lie in awareness and intervention through blind spot detection, education and self-help, as well as intervention through autonomous action. A call to action, for e.g. hackathons, is recommended specifically for areas 1, 2, and 3. More conceptual, ground work is needed for areas 4 and 5, for instance, (academic) research proposals. A transdisciplinary approach with strategic stakeholder management is key. The time to act is now.

Editorial

The year 2020 has changed our world profoundly. During the first wave of the pandemic, schools and borders were closed, people on the streets demonstrated for their rights, the sky was bluer than ever before. It is hard to imagine how our societies could ever cope with these dramatic upheavals and the so-called *new normal*, when we don't even know what this *normal* is. Women have specifically suffered from the pandemic according to the United Nations. Will a woman's new normal be different than that of a man?

What is normal to many women, like voting, going to work, opening a bank account, or sending kids to school, is far from being normal for other women. Don't you think the word *normal* actually disguises the revolutionary efforts and pains that led to some new states of normality, where we take things for granted and forget how others still suffer?

Creating a new normal is a *collective effort*, which is shaped by everyone, not only the individual. We must be thankful and recognize those who fought for the new normal. At the same time, we can't leave behind all the women in the world who are still in need.

This report is part of this collective effort. A collaboration between many different people —no matter the gender or background — united by one vision: Making the whole world a better place through gender quality.

This report is a collaboration between Women in Al and Vinnova. Authors: Marisa Tschopp, Angela Kim, Susan Verdiguel, Alessandra Sala, Victoria Bolin, Sara Ibrahim, Elena Kell.

WE ARE IN THIS TOGETHER.

SHIFTING FOCUS

here is no such thing as machine neutrality. When you watch Joy Buolamwini in front of a computer, coding with a white mask so that facial recognition systems identify her, then at a minimum we must recognize that in the IT world, not everything is going right.

AI REPRODUCES GENDER INEQUALITY

Until now, efforts done within the area of Al and gender equality have primarily focused on challenges linked to the underrepresentation of women working in Al and gender-related bias in machine learning and algorithms (it's not just biased datasets). Nowadays, we have many examples of how Al maintains, strengthens, and reproduces inequality.

This state-of-the-art is unacceptable. It is crucial to work on the root cause resulting in unfairness. The reason why certain technologies systematically don't work for certain groups of people is a multifaceted problem, having both social and technical explanations, and must undoubtedly be addressed from a transdisciplinary perspective.

CAN AI HELP TO INCREASE GENDER EQUALITY?

This report does not neglect the importance of the issues mentioned above. Yet, it aims to broaden

the perspective on the overall topic of gender and AI by focusing on how AI-based systems can be applied in order to *increase* gender equality. To achieve this goal, five specific inequality areas with pressing social needs (in accordance with the United Nations framework) were chosen.

DISCUSSING FIVE PROBLEM AREAS

This report by the global NGO Women in AI, in collaboration with VINNOVA, focuses on the following five areas: gender-related violence, healthcare inequalities, pay gap, unpaid work and uneven funding. Within each area, four questions were addressed:

- (1) How could AI contribute to this area?
- (2) What are the barriers?
- (3) Which actors should collaborate?
- (4) What Al-based applications already exist?

THE CHOICE IS IN OUR HANDS

We believe the AI field could take new directions to promote gender equality. We can use it to aid us solve pressing gender issues or continue exploiting our differences. In order to use AI to promote change, we need to become the change this technology will emulate.

KEY ISSUES

A world where all women and men, in all their diversity are equal, is a world, where economies are thriving and businesses are growing; where politics and society can reach their full potential. However, this world is still a vision for the future as too many people violate the principles of gender equality, as the #MeToo movement has shown and progress is taking place only very slowly¹. The following section will briefly revise the key issues in the chosen five focus areas, with some more detail on the countries Mexico, Ireland and Australia, where three local workshops have taken place.

AREA 1: GENDER BASED VIOLENCE

The first focus area targets violence against women, which comprises physical, psychological violence, threats and femicide.²

The World Health Organization reports that world-wide, an estimated 1 in 3 women experience physical or sexual abuse over the course of their lives³. This violence prevents women from exercising their economic, political and social rights. In Mexico, for example, more than 65% of women have experienced emotional, psychological or sexual violence from men. The key driver for gender-based violence against women is unequal access to power

and resources between women and men. Women continue to bear the heaviest burden of lethal victimization as a result of gender stereotypes and inequality.

AREA 2: HEALTH INEQUALITIES

The second area targets gender-based health inequalities, where women and men have unequal access to health care and standards of healthy living.²

The clinical practice continues to rely on evidence collected mostly from men and assumed to represent the other half of humanity despite the existence of the law mandating from 2001 the inclusion of women in biomedical research⁴. To ensure health equity for women, we need higher quality, diverse data, algorithms and health care - spanning AI solutions such as proactive bias testing to systemic changes promoting gender diversity in research, innovation, funding, policy and practice.

AREA 3: GENDER PAY GAP

The third area tackles the difference in earnings between men and women.²

KEY ISSUES

Globally, the gender pay gap is ~31%⁵ and will take almost 100 years to close according to the Global Gender Gap Report 2020 by the World Economic Forum. In the Australian workplace, according to the Workplace Gender Equality Agency (WGEA) report, the gender pay gap has declined over the last few years but is still at ~21%⁹. The pay gap differs widely, for instance in the EU with the highest gap in Estonia (25.6%) or lowest in Romania (3.5%). However, it must be noted that metrics can be complex behind the pay gap topic, for instance, that a lower pay gap does not necessarily mean more gender equality, because women may have fewer paid jobs.²

AREA 4: UNPAID WORK

The forth area targets the unequal distribution of unpaid housework, which also includes caring for children, elderly or other relatives.²

According to the United Nations report, women do 2.6 times the amount of unpaid care and domestic work that men do⁶. This unpaid household work is not trivial and by some estimates is equivalent to three days per week. This impacts income, participation in the labor force and women's health²: Globally, only 55% of women (aged 15-64) are engaged in the labor market as opposed to 78% of

men according to the Global Gender Gap Index 2020 WEF¹⁰.

AREA 5: UNEVEN FUNDING

The fifth area focuses on unequal funding, which includes, that women are treated differently regarding loans, venture capital or funding.²

Only 3% of venture capital goes to companies funded by women^{7,2} and the problem occurs at every stage of the allocation of venture capital. In one experiment conducted at the pitching stage of the process, researchers used identical slides and scripts, voiced by men and women, with or without photos of the 'presenter', and then asked study participants to rate the investment. Pitches voiced by men significantly outperformed those with a woman narrator. Recent research has also shown that investors ask different questions to women and men when pitching their ideas⁸. The National Council to Prevent Discrimination in Mexico¹¹ reports that in 2018 ~51% of the female population had been gender-discriminated at work, at school, in politics, in media, in academia, in STEM fields and more.

METHODOLOGY

Originally, workshops were planned as full day inperson workshops. Due to COVID-19 pandemic, all workshops and interviews took place online with a shorter duration.

EXPERT INTERVIEWS

Twelve (virtual) interviews were conducted with experts from heterogeneous backgrounds: AI/ Engineering, Gender studies, and industrial specialists with business, ethics, or data science background. The majority holds a master's or doctoral degree. The interviews were 30-40 minutes long, and interviewees could choose one or more of the stated gender inequality areas they preferred to talk about. The interviews focused on the barriers, suggested concrete actions, and identified who should collaborate in such an effort to ensure responsible development and use of a potential application. The interviews were recorded, transcribed, and analyzed.

LOCAL WORKSHOPS

Three online workshops lead by the respective Women in Al Ambassadors, took place in different locations: Ireland (by Alessandra Sala and Prof. Susan Leavy), Australia (by Angela Kim), and in Mexico (by Susan Verdiguel). Discussions took

place, but not all areas were addressed. Some other areas, such as family/flexible work, were discussed. Summaries of the event were provided by the respective organizer and then analyzed by the lead author.

GLOBAL WORKSHOP

Following all workshops and interviews, a final global 2-hour workshop took place. All experts and organizers were invited. The 25 participants were separated into different working groups per target area after a brief overview of the interviews and local workshops' insights. Within the sessions, ideas and limitations were discussed and prepared to be presented on an online platform, where all participants had the opportunity to give feedback.

REPORT

The final report integrates the key insights from the expert interviews, the local and global workshops, and is accompanied by desk research on the current state-of-the-art within the five areas. This report was open for review by the experts for two weeks. A list of experts, existing applications, and references can be found at the end.

GENDER EQUALITY IS NOT ONLY A FUNDAMENTAL HUMAN RIGHT, BUT A NECESSARY FOUNDATION FOR A PEACEFUL, PROSPEROUS AND SUSTAINABLE WORLD.

~UNITED NATIONS

HOW CAN ALCONTRIBUTE?

KEY OPPORTUNITIES

KEY OPPORTUNITIES

Within the chosen areas, ideas on how Al can contribute to promote gender equality can be organized into two categories: The individual level, which focuses on empowering a person, for instance the woman, and the organizational level, which focuses on Al-based systems that can be deployed by an organization or institution.

AI AS AN EMPOWERING TECHNOLOGY

Key opportunities from this individual level perspective are:

- (1) Finding/receiving relevant information
- (2) Self-help through interactive communication and assessment tools to reflect on the situation
- (3) Getting autonomous help by an application.

Here an Al-based system clearly aims to empower individual women to better understand a situation, make better decisions, and/or let a device (e.g. mobile phone) decide what to do in an emergency situation. These ideas were specifically relevant in

the area of domestic violence: An undetectable hardware component (bracelet or necklace were discussed examples) with specific software (which must also be disguised), can autonomously act. For instance, the device can call the police in an emergency situation triggered by screaming or a previously set wake word.

AI TO MAKE THE INVISIBLE VISIBLE

Key opportunities from this perspective focus on:

- (1) Detecting patterns
- (2) Improving decision making

On the organizational level, an Al-based system could aim to detect blind spots to come into power and create change. Depending on the areas, various ideas were discussed, such as how to increase the visibility of problems or marginalized people. In Human Resources (HR) Management, people analytics tools can be used to analyze wage and promotion patterns (relevant for area 3: pay gap) or text structures. For instance, job ads can be analyzed for masculinity bias or doctors'

HOW CAN ALCONTRIBUTE

KEY OPPORTUNITIES

notes to investigate whether men were diagnosed differently than women.

In the area of uneven funding, as well as in the pay gap area (specifically HR), it was discussed if an AI-based system can be used as a co-evaluator for decision making, hoping to decrease human bias. The person who gets the funding is co-evaluated by an algorithm with rules focusing on promoting gender equality.

Furthermore, indigenous women seem to be mostly invisible, as discussed specifically in local workshops in Mexico and Australia. In this area, there is much hope that Al-based systems could help in order to increase individual opportunities. Specifically discrimination against indigenous women should be addressed, for example in recruiting or personal health.

In the area of unpaid work, it was brainstormed how to map out, trace or explore the workload at home, and how to compare it. This could be household or childcare, but also elderly care out of home. Furthermore, it was debated how automation, and robotics specifically, could help in terms of sharing workloads (care or cleaning robots). It is clear that this is an essential topic to explore, yet, already gathering and analyzing valid data poses serious ethical questions and privacy concerns.

KEY OPPORTUNITIES

- ⇒ From awareness to intervention through blind spot detection
- ⇒ From awareness to intervention through education and self-reflection
- ⇒ Intervention through autonomous action

MOST DISCUSSED QUESTIONS TO FOLLOW UP

KEY OPPORTUNITIES

VIOLENCE

,How can we analyze local risk zones and send out warnings?'

,Can we provide better/more personalized information for victims of bullying or other forms of violence?

UNEVEN FUNDING

,Men use different words in funding pitches—can we analyze the vocabulary and make recommendations?'

HEALTH

,Can we analyze doctoral notes and/or patients notes to evaluate differences in pain diagnosis for men/women?'

,How can we make women with indigenous background more visible?'

UNPAID WORK

,Can we track, who does what in the household to identify inequalities?'

KEY TRENDS

- \Rightarrow How can we detect systematic differences with AI?
- ⇒ How can we enhance human decision making with AI?

PAY GAP

,Can we use the data to persuade management that there is a problem with the wage gap?'

KEY TRENDS

- ⇒ Prevention: How can victims get information?
- ⇒ Warnings: How can victims get warned?
- ⇒ Emergency: How can victims get help?

WHAT ARE THE BARRIERS?

KEY CHALLENGES

FROM QUESTIONS TO IDEAS AND BACK AGAIN

After the creative brainstorming process, a more analytical part in form of the global a workshop was conducted to dig deeper into how Al can contribute. This comprises not only technical feasibility but also discussions from a legal and ethical perspective. This means we need to ask *should we?* as well as *can we?*

For instance, we wanted to know how AI can help women who are victims of domestic violence or contribute to making the streets safer. We discussed potential solutions, such as an IoT Device integrated into a bracelet that calls the police or an application built in Googlemaps, which warns a woman if she is about to enter a potentially dangerous area because of very low street lighting. These great ideas must be followed by assessing other factors, which are often context dependent: Can we create such an App (hardware and software) that is accessible, does not get lost, preserves privacy, and is at the same time undetectable by a potential abuser?

Within the other areas, the following challenges were discussed:

Can we track household work without having to install cameras or tracking apps, which may pose a huge challenge for a relationship? Can we implement care robots without neglecting the complexity and responsibility of what it means to take care of a human?

Can we use a biased/non-perfect Al-based system to help evaluate who is eligible for funding? If we use people analytics tools and monitor wages, career tracks, job ads, CVs, and potentially even written communication and meetings: Isn't this more harmful to a trustful team culture? Do we really need numbers to convince the management that the pay gap is real?

Furthermore, how do we differentiate between different countries? Many of these principles don't work in emerging countries as the focus is often biased towards major economies and western values

So, - can Al solve one of these problems without making them worse?

THE SAME TOOLS THAT GIVE US POWER CAN ALSO TURN INTO NEW MEANS OF BULLYING.

~PROF. DR. JOANNA BRYSON

WHO ARE THE KEY ACTORS?

KEY STAKEHOLDER

The challenges are complex. There is no straightforward solution or quick fix. A multi-stakeholder, transdisciplinary approach is absolutely necessary. Especially, as we are dealing with people at risk and highly sensitive information, e.g. health data, we must do anything possible to avoid unintended consequences.

It is well understood that dealing with AI, from development to deployment, should integrate various stakeholders. Nevertheless, the depth and intensity needed are largely underestimated. It is not enough to hire an ethicist or someone with a legal background.

It must be estimated beforehand how many resources are available and then decide who to involve at what point of time: When developing the ideas? When testing? When implementing? When revising? All the time?

Stakeholder management is a discipline by itself. Who to engage, at what point of time, and to what extent is a decision not to be taken lightly. Great investments must be expected here, if done thor-

oughly. Stakeholder engagement is a necessary, underestimated cost, but most importantly, it is a quality and image preserving step. The following list is not comprehensive, and should only serve as an indicator of what was mentioned by the experts or within the workshops. Furthermore, it gives an idea of how complicated it is to find the right kind of people for the respective project.

Al & Gender Equality: Stakeholder Management

Who to engage at what point of time depends on the type of question, amount of resources, and *good* project management:

- ⇒ Computer/Data Scientists: Academics and practitioners, with expertise in software engineering, AI/ML, IT security, (etc.)
- ⇒ Gender study experts by area (e.g. violence, health, etc.)
- ⇒ Legal/policy experts, and politicians
- ⇒ Tech-ethicists /philosophers
- ⇒ Psychologists/sociologists (social sciences)
- ⇒ Business/economics experts
- ⇒ NGO's, charities, activists
- ⇒ People affected by the system: e.g. doctor, patient, administrative staff, victims, police, HR Managers, potential users, (etc.)
- ⇒ People with knowledge of both AI and the respective area of expertise will be of most value and most hard to find

RECOMMENDATIONS

GENDER-BASED VIOLENCE

Within this area, already many applications, e.g. personal safety apps, already exist (see page 18) and can be built upon. Most opportunities lie within detection, autonomous help, area safety warnings, and education. Experts agree that the greatest impact is on empowering individual women. This is a pressing need and it may be possible to achieve results (in terms of realizing projects) relatively fast, if smart stakeholder management and privacy protection measures are taken care of. Collaborations with good stakeholder management can lead to fast, high impact results.

HEALTH INEQUALITIES

Al in health care is on the rise as can be seen from the variety of already existing apps (see page 18). A lot is happening behind closed doors. The most discussed issue was around how to create more diverse datasets. Furthermore, the roles in the doctor-patient technology context are not clear enough as well as who are the people most affected. It seems promising how remote diagnosis could decrease bias, female patients' education could help the individual, and systems could help doctors make better decisions. Most important to create

impact here is to focus on a very specific and narrow use case, such as exploring patterns of gender differences in pain diagnosis.

GENDER PAY GAP

Discussions in this area focused on people analytics tools and how they can be used to detect and warn employers if inequalities exist. This should serve as a basis for blind-spot detection and a persuasion tactic to not only create awareness but motivate for change. It is possible to use of certain people analytics tools without transforming the workplace into a surveillance machine. Close collaboration with work psychologists, HR Managers who are knowledgeable in the Al/data science field is the most promising track.

UNPAID WORK

Unpaid work was the most difficult area to identify how AI could help or intervene. Examples of robots or tracing data were discussed with great skepticism, as it is questionable how this may preserve privacy and healthy relationships. So much groundwork is missing in this area, collaborations with social sciences are called for. **Much more**

RECOMMENDATIONS

exploration on a theoretical and conceptual level must be done having technology assisting already in mind.

UNEVEN FUNDING

The idea that algorithms could be co-evaluators, was deemed most promising. However, the technical feasibility poses the greatest challenge. It is unclear if an algorithm, which is most likely biased, can be used to de-bias human decision making. The most significant impact may be through detecting a problem, thus making the gender inequality visible, but less in actually fixing it. This responsibility lies within the human culture.

Within the workshops, other topics were discussed, such as culture and communication patterns, flexible work places, or leadership, which could be interesting for future projects.

POSITIVE SPILLOVER EFFECTS

Despite the importance of choosing very specific use cases, the discussions also made clear that some of the areas are interrelated and that improvements in one area may also lead to improvements in other areas. For instance, decreasing inequalities in unpaid work or wage gap may lead

to higher financial status for women/families and could reduce domestic violence or violent acts in public as women are better equipped— or do not need— to work/travel/live in certain places.

GENERAL KEY LEARNINGS

Taking a systemic approach

- ⇒ Technology is not independent from society
- ⇒ Al-based systems are not isolated from ICT
- ⇒ Stakeholder management and AI literacy are key

Positive spillover effects

- Chosen areas are interrelated and working on one area can positively influence other areas
- ⇒ Identified solutions or approaches can be useful for other sustainable development goals

Al can contribute by

- ⇒ Al as a communication and empowerment tool for the individual
- \Rightarrow Al-based systems for blind spot detection
- ⇒ Al-based systems for autonomous action

ALFOR EQUALITY

EXISTING AND FUTURE SOLUTIONS

Many already in use Al-based applications exist in the areas 1, 2, and 3, a promising field to invest in prototyping, improvement or new ventures. The areas 4 and 5 lack technical ideas as well as conceptual frameworks, a promising field of innovative research.

(1) VIOLENCE

EXISTING APPLICATIONS

- Safetipin, Sisbot, Spotlight, Traffic Jam - Helping victims of violence and finding human trafficking victims
- UrSafe, Nibye—Personal safety app

FUTURE IDEAS

- Analyses of local risk zones and location tracker
- Automated emergency call (domestic violence via IoT device)
- Chatbots for further, better education of

(2) HEALTH INEQUALITIES

EXISTING APPLICATIONS

 Gracehealth, Bonzun, NaturalCycles, WildAl, Babylon Health, Biobase, Wysa, MyCoach-Connect

FUTURE IDEAS

- Analyses of doctoral notes for bias in pain diagnosis
- Diversify data sets to include women with indigenous background
- Chatbots for further, better education

(3) PAY GAP

EXISTING APPLICATIONS

- CompIQ—Fair Pay solution
- Gapsquare—Analyzing pay levels
- PAR Platform—
 Measuring and comparing gender equality/ diversity progress in organizations
- PIHR—Fair Pay solution

FUTURE IDEAS

- Track and compare wages in companies
- Track and compare promotion opportunities
- Automate notification in collaborate with politics to receive incentives
- Specific focus on indigenous women

(4) UNPAID WORK

EXISTING APPLICATIONS

- 9
- Lack of existing applications but research projects e.g. DomesticAl, GenTime

FUTURE IDEAS

- Track and compare household activities (via loT Device)
- Household robots to take over work load (also with tracking abilities to compare work load)

(5) UNEVEN FUNDING

EXISTING APPLICATIONS

• ?

 Lack of existing applications but research projects e.g. Rikare II, Alice

FUTURE IDEAS

- Word analyses of funding decisions
- Algorithm as co-decision maker to reduce human bias

OTHER RELEVANT APPLICATIONS

- Ceretai—Detecting bias in pop culture
- Enteleo—Anonymous interview solution
- Ailira—Analyzing gender bias in job postings
- i-MAP—Measuring female representation in the public sector
- Nobias—Inclusive communication
- Prometea—Transforming public institutions
- Pymetrics—Talentmatching platform
- Talvista, Textio—Analyzing gender bias in job postings
- Unbias—Removing faces from online profiles

THERE'S OFTEN A DESIRE TO
ASSUME THAT YOU CAN THROW THE
DATA SCIENTIST A QUESTION OVER
THE WALL AND THEY THROW BACK
AN ANSWER, THAT'S ALMOST NEVER
THE CASE.

~ PROF. DR. SURESH VENKATASUBRAMANIAN

OUTLOOK—WHAT NEXT?

AI FOR GENDER EQUALITY

This collaborative project has discussed serious issues as well as opportunities, such as how and if Al can contribute to increasing gender equality within five chosen areas. What barriers hinder society to use Al to bring the Sustainable Development Goal (SDG 5: Gender Equality) forward? How does clever stakeholder management look like to reach these goals?

In a nutshell, from a technical, ethical, and legal perspective the workshops and interviews have demonstrated that there are a number of ideas, where Al can play a role and be part of a solution, if used wisely with a transdisciplinary approach.

Now we have to "get our hands dirty" and actually do the work.

We recommend starting follow-up projects on top of existing ones identified within the report and new ideas emerged and assessed in the workshops. In-depth focus and hard work on specific ideas is now needed with mandatory involvement of specialists knowledge in AI and the relevant area.

Next recommended steps, where number (1) and (2) are more about knowledge generation and (3) about implementing/prototyping:

- (1) Transdisciplinary workshops with written outcomes especially for areas 4,5)
- (2) Supervised interdisciplinary degree theses (all areas, especially 4,5)
- (3) Prototyping: Hackathons (especially for areas 1,2,3)

We want to encourage readers, who can and are willing to take action to change the situation, to build upon this report, connect with the organizers of local workshops, experts or project managers (see list in the appendix).

Furthermore, we want to stress the urgency of taking the next steps *now*. It is time to take a stance against gender inequality, invest and work in an open, collaborative manner so we can all benefit from a more equal, peaceful, and sustainable world.

AI & GENDER EQUALITY

No country can ever truly flourish if it stifles the potential of its women and deprives itself of the contribution of half its citizens.

~Michelle Obama.

IF WE USE AI FOR BLIND SPOT
DETECTION, IT HELPS US SEE WHAT
WE COULD NOT SEE AND
THEREFORE HAVEN'T BEEN ABLE TO
CHANGE.

~PETRA DALUNDE

LIST OF APPLICATIONS

IN ALPHABETICAL ORDER (NOT COMPREHENSIVE)

Ailira—Analyzing gender bias in job postings

Ceretai—Detecting bias in pop culture

CompIQ—Fair Pay solution

Enteleo—Anonymous interview solution

Gapsquare—Analyzing pay levels

Gracehealth, Bonzun, NaturalCycles, WildAl, Babylon Health, Biobase, Wysa, MyCoach-Connect—Womens' health solutuions

i-MAP—Measuring female representation in the public sector

Nobias—Inclusive communication

PAR Platform—Measuring and comparing gender equality/diversity progress in organizations

Perspective— Equal education

PIHR—Fair Pay solution

Prometea—Transforming public institutions

Pymetrics—Talentmatching platform

Safetipin—Public safety

Sisbot—Helping victims of violence

Spotlight, Traffic Jam—Finding human trafficking victims

Talvista—Analyzing bias in job postings

Textio—Analyzing gender bias in job postings

Unbias—Removing faces from online profiles

UrSafe, Nibye—Personal safety app

LIST OF EXPERTS

ALPHABETICAL ORDER

We would like to express our sincere gratitude to all experts involved:

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Vicky Charisi, Senior Research Scientist at the European Commission

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REFERENCES

- European Commission (2020). Gender Equality Strategy: https://eur-lex.europa.eu/ legal-content/EN/TXT/?uri=COM%3A2020% 3A152%3AFIN
- European Parliament (2020). Understanding the gender pay gap definition and causes: https://www.europarl.europa.eu/news/en/ headlines/society/20200109STO69925/ understanding-the-gender-pay-gapdefinition-and-causes
- WHO: Violence against Women: https:// www.who.int/news-room/fact-sheets/detail/ violence-against-women
- 4. Hariharan, K. (2020). How Will AI Affect Gender Gaps in Health Care? https://www.brinknews.com/how-will-ai-affect-gender-gaps-in-health-care/
- WEF (2020): Global gender gap report 2020: http://www3.weforum.org/docs/ WEF_GGGR_2020.pdf
- 6. UN Women (2018): https://
 www.unwomen.org/-/media/headquarters/
 attachments/sections/library/
 publications/2018/sdg-report-summarygender-equality-in-the-2030-agenda-forsustainable-development-2018-en.pdf?
 la=en&vs=949
- 7. Crunchbase (2020): A Decade in Review: Funding to the Female Founders https://about.crunchbase.com/wp-content/

- uploads/2020/03/Funding-To-Female-Founders_Report.pdf
- Kanze, D., Huan, L., Conley, M.A., Higgins, T.E. (2018) We Ask Men to Win and Women Not to Lose: Closing the Gender Gap in Startup Funding. https://doi.org/10.5465/ amj.2016.1215
- WGEA Data Explorer https:// data.wgea.gov.au/home
- Global Gender Gap Index (2020): https:// reports.weforum.org/global-gender-gapreport-2020/the-global-gender-gap-index-2020/
- National Council for the Prevention of Discrimination https://eulacfoundation.org/en/ mapeo/national-council-preventiondiscrimination-conapred

Further readings:

- AINOW Institute (2019): Discriminating Systems—Gender, Race, and Power in AI
- 2. Buolamwini, J. & Gebru, T. (2018): Gender Shades
- 3. O'Neil, C. (2017): Weapons of math destruction
- 4. Eubanks, V. (2018): Automating Inequality
- 5. UNESCO (2020): Artificial Intelligence and Gender Equality

ABOUT US

Women in Al

Women in AI (WAI) is a nonprofit do-tank working towards gender-inclusive AI that benefits global society. We are a community-driven initiative bringing empowerment, knowledge and active collaboration via education, research, events, and blogging.

https://www.womeninai.co

VINNOVA

Vinnova is Sweden's innovation agency. We help to build Sweden's innovation capacity, contributing to sustainable growth. Our vision is that Sweden is an innovative force in a sustainable world.

https://www.vinnova.se

A SHARED VISION IS WHAT WILL ALLOW FOR A CHANGE.

~MARIA AXENTE