Leading with Artificial Intelligence Lab

Ignite and build your ideas for a sustainable future

August to November 2020

Convening partners:

ITC ILO — International Training Centre

global leadership academy — we do change

FAIR FORWARD — Artificial Intelligence for all.

giz — Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

TABLE OF CONTENTS

LEADING WITH ARTIFICIAL INTELLIGENCE LAB

IGNITE AND BUILD YOUR IDEAS FOR

A SUSTAINABLE FUTURE

There are ongoing debates on how exponential technologies like Artificial Intelligence (AI) are already shaping all spheres of life, including workspaces and competencies needed to be strengthened in future technological societies. These will change the very nature of work as we see more automated technologies assisting, augmenting and in some cases replacing workforces. The skills needed for the future workplace are going to change. In the time of global disruption, such as the pandemic outbreak of COVID-19, social change is inevitable and is unleashing opportunities for transformation. We are bound to social distancing, to work remotely, to decide fast according to growing local and global data sets. Future scenario discussions already call for sustainable behavioural change considering this acute crisis but also bearing in mind the complex challenges such as climate change and speeding species extinction, potential resource conflicts, economic systems instabilities, and fast assimilation of digital tools in all spheres of life. Times of disruption also open opportunities for faster comprehensive behavioural change and adaptation that may lead to more sustainable systemic development on a medium and long-term perspective.

HOW CAN ARTIFICIAL INTELLIGENCE SUPPORT US TO BETTER PREPARE FOR FUTURE TRANSFORMATIONAL DEVELOPMENT?

To address this question, the Global Leadership Academy (GLAC) together with the International Training Centre of the International Labour Organization (ITC/ILO) offered an online collaboration platform for learning and co-creation to engage change makers from civil society, private and public sector in a multi-stakeholder dialogue process, a Leadership and Innovation Lab. The Lab experience differentiates from traditional online approaches of MOOCs, online courses and other similar formats.

- It wasn't a course, yet we had the opportunity to learn!
- It wasn't an online meeting, yet we had the opportunity
- To engage in conversations!
- It wasn't a conference panel, yet we happily share testimonials!

We create spaces for global leaders and change agents to learn with and from participants with very diverse experiences, expertise and backgrounds, understanding different needs, limitation and opportunities - to change the perspective and come up with innovative solutions. That means diverse expertise and experience is already in the group of participants and not only brought by trainers. The unique value of the dialogue process is enabling learning for actionable change to be truly taken to scale, reaching a globally diverse audience of leaders. Being equipped with comprehensive tools that are essential for taking your idea to the next level and develop feasible steps that support the initiative become reality and create tangible impact.

The Lab aimed at the following objectives:

1. Demystify the public's perspective on AI
2. Prepare for a human-centred AI future with the skills to better interact with these technologies
3. Practical applications to enhance response to global events
4. Scaling up AI ideas globally through Open AI, Open Data and Open Innovation

OUR APPROACH

The Lab was a 3-month online journey, from August to November 2020, to take transversal inspiration to a broader scale, by engaging a broad and diverse audience to impact local, regional and global ecosystems.

With a mix of methodologies, participants were invited to learn and share different perspectives on myths around the technological and social transformation, to foresee potential future scenarios and human skill sets needed to lead the transformation. Various peer exchange opportunities and a guided leadership reflection journey complemented the experience and form the basis for collaborative action.

As participants of the Lab, global leaders and change agents had the opportunity to share a design challenge, engage with international AI experts, connect with a global community of multi-stakeholder individuals to co-ideate solutions, learn from peers on how to bring human-centred AI ideas to life.

We consider diversity is a prerequisite to overcome professional silos and to address the broad spectrum of effects surrounding AI. Hence, the space is created to meet with people who usually don't meet at other occasions.

Our associated partner, FAIR Forward, offered connections to further ongoing initiatives to take up actionable ideas and engage with you through additional training and policy programmes on open AI, open Data and AI innovation.

PARTICIPANTS

PARTICIPANTS

The Lab was open to interested global change makers up to a limited number of participants. To assure the most engaging experience, we balanced diversity of the group considering the following criteria:

- Diversity in professional expertise from the private and public sector, and civil society
- Socio cultural and geographical diversity
- Broad age range and balanced gender
- High interest in the use of AI, including digital natives and non-natives

154
PARTICIPANTS

61
NATIONALITIES

20 - 65
AGE RANGE

42 % Female   58 % Male

Oceania 1%
South America 8%
North America 5%
Africa 43%
Europe 22%
Central America 3%
Asia 18%

Training / Coaching — 5
Public Sector (Government) — 36
Other Private Sector — 16
Non-Governmental Organisation (NGO) — 22
Law — 5
Journalism / Media — 1
International Organisation — 19
Industry / Manufacturing — 6
Consulting — 12
Civil Society — 6
Academia / Education — 26

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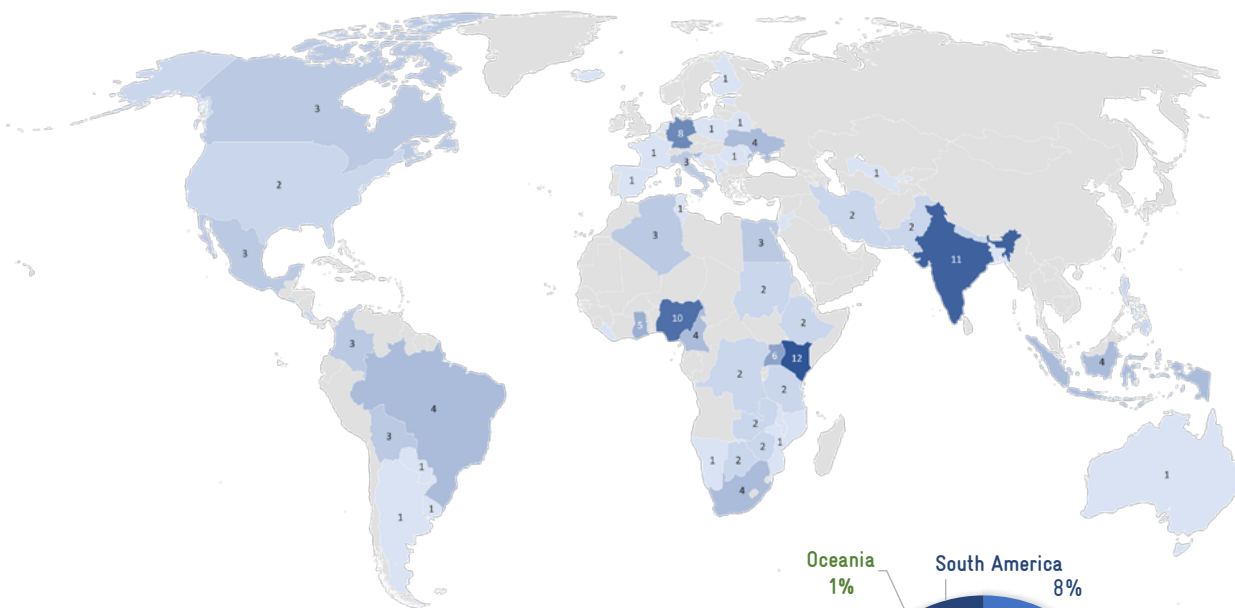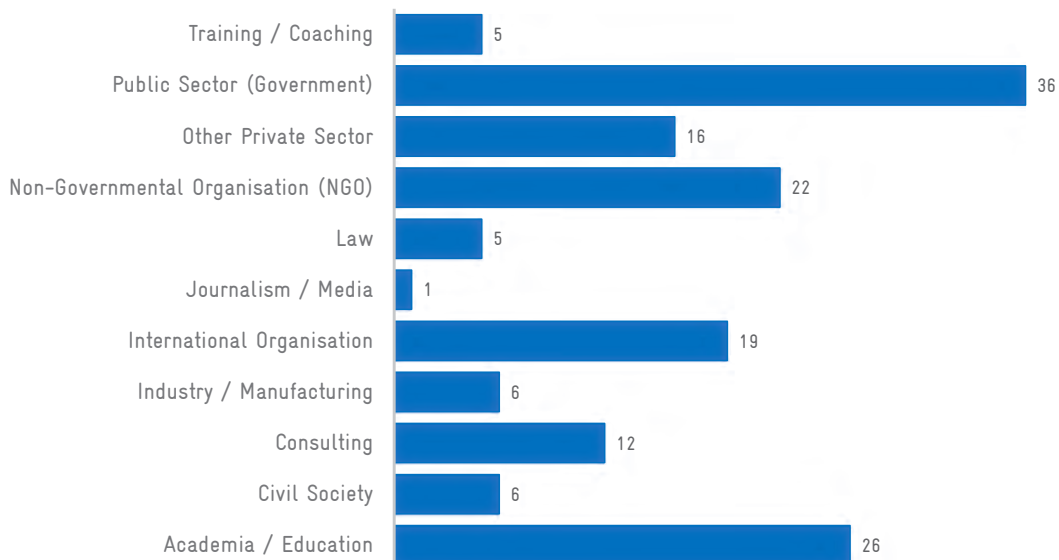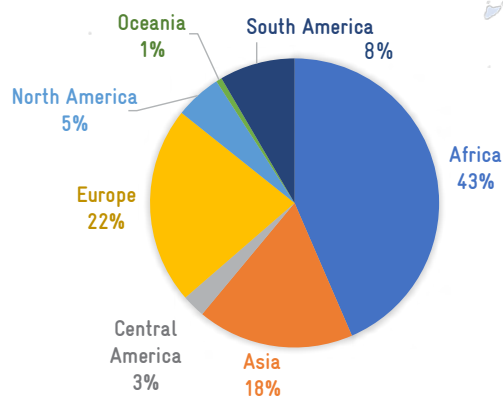
COFFEE BREAK CHAMPIONS

HUMANS OF AI

"Talent wins games, but teamwork and intelligence win championships!"

By joining the Lab participants had the opportunity to get in touch with a global community and to tap into this richness of diverse expertise!

Informal coffee break sessions aimed at getting to know fellow participants and exchanging perspectives on AI-related questions. Some of the very active coffee break champions shared their perceptions on this experience.

MARIJANA ŠAROLIC ROBIC   KATHARINA MILLER

Attorney-at-law by trade, artificial intelligence (AI) enthusiast by choice.

Fostering change and connecting minds through a virtual knowledge exchange on artificial intelligence (AI). Click here to see her video.

"This is an opportunity to align our values and ethics on a global scale."

Marijana is one of the 155 international participants involved in the Leading with AI: Ignite and build your AI-driven ideas Lab.

Although participants are separated during this time of social distancing, their virtual connections are what make Marijana's experience so memorable. "From the launch of our course, I tried to be as active as possible and contribute with my expertise and experience," she shares, "I participated in a few **coffee sessions and forums where we exchanged our opinions** and ideas on different aspects of AI."

As an attorney-at-law in Croatia, Marijana works in the AI regulatory field to support AI companies in designing their business models in accordance with current regulatory trends. This lab serves as a space to discuss and debate the applications of AI.

"We shared our good wishes on the benefits of AI and all potential global applications," she explains. Yet, it is not all positive: "We also share the same concerns and fears. It is important more than ever to continue our conversations in an open area of opinion and experience."

"I am determined to advance the way we live and work together."

The sense of collective action was born through the exchanges of these global participants. Their willingness to learn and share their knowledge pave the path for a more ethical AI future.

A woman with a way forward

Meet Katharina Miller, a multifaceted individual on a mission to promote the 2030 Agenda both personally and professionally.

"For me, it's of utmost importance to find solutions for our living together in the Fourth Industrial Revolution by implementing the 17 SDGs."

Katharina's vast background stretches from legal, operational, and risk management experience to compliance and **ethics, women's rights, and innovation**. As a founding partner of 3C Compliance and a qualified lawyer, she sees connections with AI at multiple levels.

Her active participation was most particularly noted by the initiative and proactivity to host virtual coffee breaks with other lab mates. Together, they even created a blog to highlight some of the AI-deas shared.

Moving forward, Katharina is passionate about infusing her daily work with the insights gained during this participatory journey. "The lab inspired me to learn more about AI and **become a proactive change agent**," she shares.

As a result, she recently co-founded a working group on "Data-Driven Technology and Equality" with the Berkeley Law School's Comparative Equality and Anti-Discrimination Law Centre. Katharina is actively translating her aspiration into action.

POOJA GIANCHANDANI
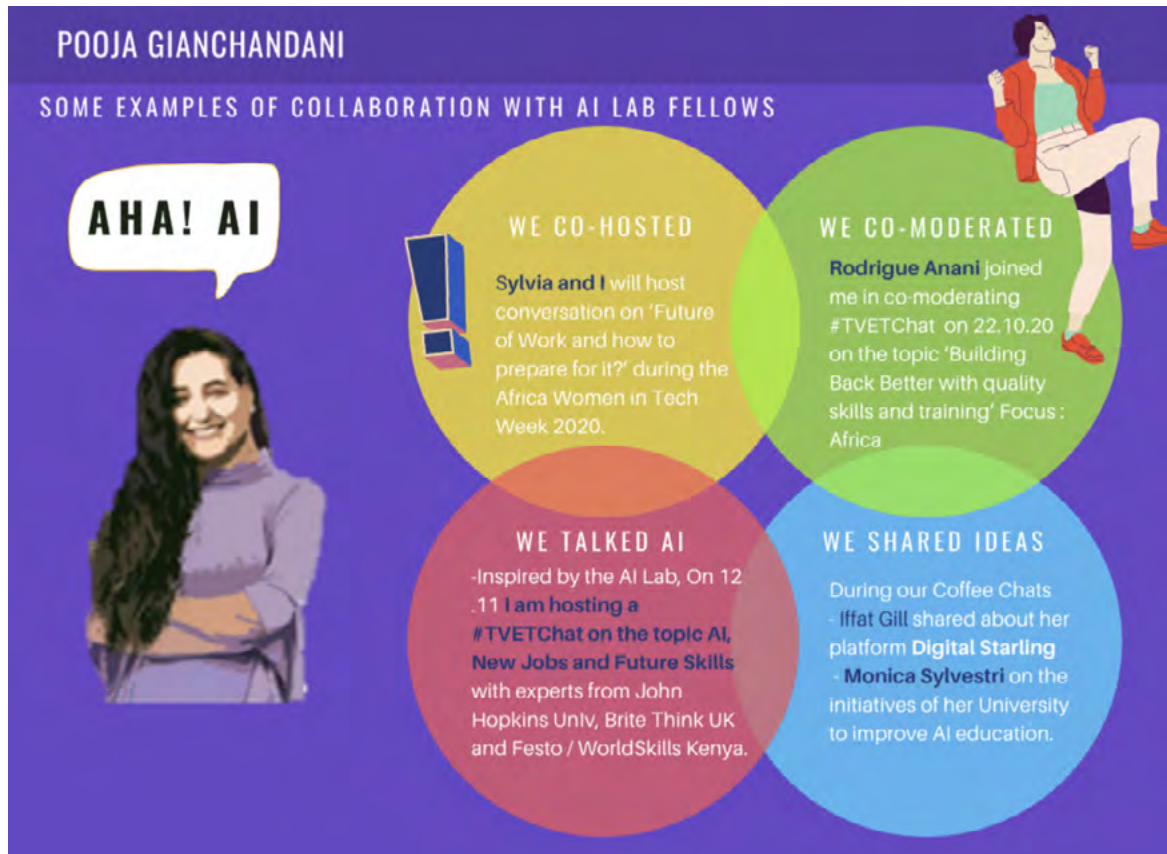
Pooja Gianchandani, global citizen and AI Lab participant, shares her curiosity about AI and the digital transformation:

Advisor by day, skills warrior by night

"COVID-19 has proven yet again that vocation is the new superpower. Just as every superhero has special powers, so does every human. We all have **a special talent, a skill that can lead to a positive impact** both for ourselves and the community. As transformations shape our society, the way work is organised and the skills needed to perform everyday tasks constantly changes. Our reliance on digital tools powered by AI continues to increase.

What is AI? How does it affect our lives? Will AI really replace human beings? What skills will everyday people need to cope with the AI world? These and many more questions led me to the Leading with AI: Ignite and build your AI-driven ideas Lab, a 3-month learning journey co-hosted by GIZ's Global Leadership Academy and the International Training Centre of the ILO.

From novice to superhero

Our journey with this course started in September 2020, when conference and webinar-season was at its peak. My questions, curiosities, and predictions on how digitalisation will alter the world had been growing. I started the AI Lab

as a total novice, absorbing as much input as I could. I listened to the other fellows and learned from their experiences. Frankly, I was very relieved when one of the experts exclaimed, "Don't worry Skynet will not take over the world." This was a rare opportunity to engage with other like-minded professionals. I started hosting virtual coffee chats on AI, the future of work, and skills. Over the next 6 – 7 weeks, we met every Friday afternoon and shared ideas about our projects and ongoing initiatives. We discussed policy issues and collectively sketched the various themes and sub themes that need more focus.

The biggest success of the AI Lab, and what distinguished it from other programmes, was access to a unique global community. The organisers gave us space and time to collaborate, and allowed for honest exchanges with our peers.

My biggest take away and by far the best: the AI Lab inspired me to start journalling again! The journalling process experienced during the Lab was a gentle reminder to focus on the important things. It has altered the way I plan and view tasks. The AI Lab upgraded my superpowers, ready to confront and contribute to a world in transformation."

THE PROCESS

FURTHER INSIGHTS INTO THE LAB

Organized around three topic blocks of demystifying, future scenarios and AI applications, the Lab process comprised of a mixture of learning material and exercises, group formation and peer exchanges as well as leadership impulses to culminate in developing practical AI-deas.

THE JOURNEY

LEADING WITH ARTIFICIAL INTELLIGENCE TO A SUSTAINABLE FUTURE

RANDOMIZED COFFEE TRIALS

PEER-EXPERT EXCHANGE

Kickoff Meeting

DEMYSTIFYING AI
SEPT. 10

AI FUTURE SCENARIOS
OCT. 10

AI APPLICATIONS
OCT. 22

Pitching Session

COFFEE BREAK SESSIONS
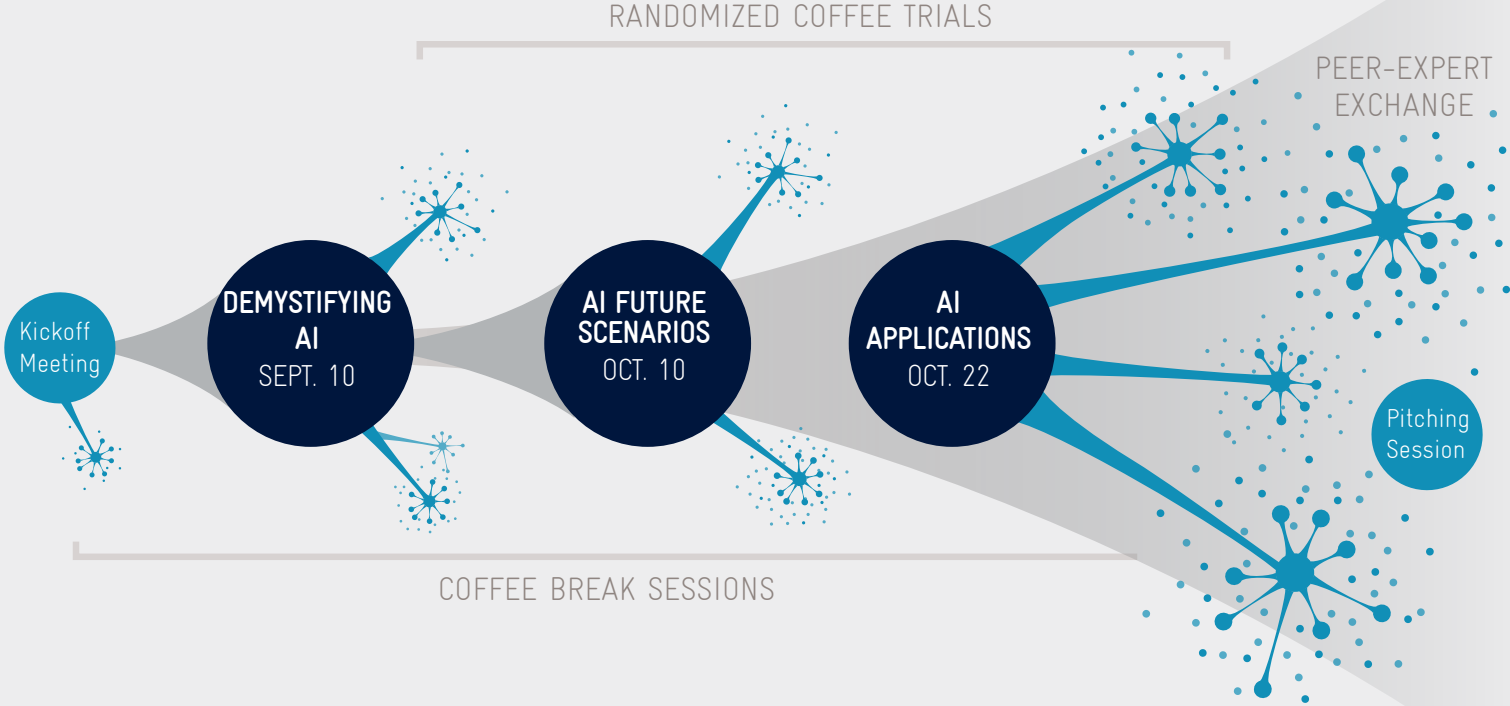
KICKING OFF THREE MONTHS OF LEARNING, IDEATING, AND REFLECTING AT THE AI LAB

Big data. Machine learning. Chat bots. Smart cities. Buzzwords linked to Artificial Intelligence (AI) fill our social media feeds, publicity campaigns, and news articles. But, what do they really mean? What's their potential? This is exactly what inspired the AI Lab.

On August 28, over 150 participants began their learning journey with the Leading with AI: Ignite and build your AI-driven ideas Lab. This 3-month online collaboration platform, co-hosted by GIZ's Global Leadership Academy and the International Training Centre of the ILO, aimed to connect with the global community to bring human-centred AI-deas to life.

The lab kicked off with a virtual welcome session, connecting the **participants from around 70 countries around the globe**. Amidst the COVID-19 crisis, this platform enabled global citizens to unite for a common cause: How might AI assist, augment, or replace our workforces?

"AI is sparking a transformation"

"We must put our powers together to make a change," opened Mareike Zenker from the Global Leadership Academy. She went on to share the utmost value of having such a diverse group of participants, giving space for learning, listening, being open to opposing views, and finding flexibility in change.

Reflections on AI and the future of work were central to the opening remarks from Tom Wambeke, Chief of Learning Innovation at the ITC/ILO. "**AI must be demystified**," he shared. Upon observing discussions on robotization and automatisation, he is curious to discover the impact of humans and machines for the future of learning.

Nice to (virtually) meet you

Introductions and genuine connections may be a challenge to cultivate when separated by screens. Yet, the first forum activity allowed participants to visually introduce themselves and share what intrigues them about AI.

"As we are all part of this world, we have the responsibility to use AI to improve people's lives, promote local development, and a sustainable future." – Tamara, Costa Rica

AI has infinite applications. For Anthony from Kenya, AI can alleviate human suffering. For Paraguayan, Claudia, AI can impact the future of jobs. In Cameroon, Tanyi aspires to use AI to address the COVID-19 "new normal."

Curiosity is key. Many questions and calls to action were raised. Iranian, Parisa, probed: "Can AI save us from the unemployment crisis and growing poverty?" Gamelihle from Ghana questioned whether ethical AI can be used as a tool to augment human intelligence rather than to replace it.

To leverage the learning experience, "Coffee Breaks" were created as self-organized forums for participants to engage on themes of their interest. From "AI, Nature, and Climate Change: What AI can and cannot do" to "AI Ethics of COVID-19 Tracking Apps," the inquiries are endless. These virtual coffees **triggered knowledge sharing** and set the tone for a dynamic AI Lab.

AI LAB PARTICIPANTS DEMYSTIFY
THE WORLD OF (WO)MAN AND MACHINE
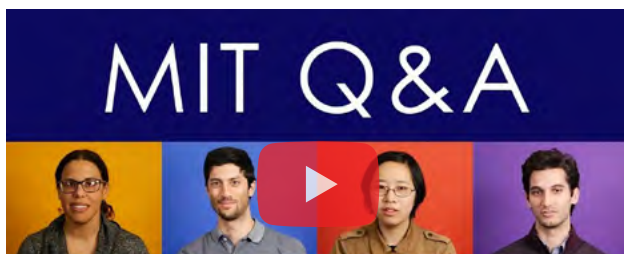
How would you define AI? Click to watch the YouTube video.

If you had to define Artificial Intelligence (AI), where would you begin?

Information processing. Machine learning. Computer-based problem solving. The list goes on. Even MIT computer scientists debate on the definition:

During this first block of the Leading with AI: Ignite and build your AI-driven ideas Lab, participants began to demystify AI.

Definitions stretched far and wide, touching upon the many facets of AI. For a Cameroonian participant, AI technology is referred to as "Marabout," meaning anything that is not human yet does what a human can do.

While for another participant, AI recalls human-centred design or the approach that puts **the human perspective at the heart of innovation**. This further evolves into "how AI systems can consider, protect, and help fulfil notions of dignity and human rights for people."

Slowly but surely, the AI buzzwords and definitions began to fall into place. Lab participants fostered their unique (AI)BCs.

Inputs and insights

To explore the potential opportunities, challenges, certainties, and uncertainties of an AI-driven society, participants engaged in a collaborative brainstorming session. Post-it by post-it the virtual whiteboard (*thumbnail to the right, click to open*) began to fill with ideas, visions, and risks.

What we know for certain is that AI will increase our efficiency and productivity, nevertheless it is not equivalent to human intelligence. Participants noted that many governments, scholars, and businesses are investing in AI research and development. AI sparks curiosity, but humanity still offers an added value.

"Humans give wisdom to machines."

What will be the role of our emotions when AI becomes a key component of our human interactions? Are we as humans developed enough to use AI for good? **How can we make sure AI is used ethically?** This just scratches the surface of what participants question and wonder about AI.

Contemporary applications and integrations of AI come with a series of challenges about trust, unreliable datasets, and technological threats. Participants advocated for rethinking our education models to promote new skills required by AI.

Moving forward, the opportunities for (wo)man and machine are endless. From diagnosing diseases to tackling climate change and helping rural communities, AI has the potential to scale up the reach of services. With routine tasks being replaced, **AI makes space for more innovation and creativity**.

AI for Sustainable Development

The versatility and interdisciplinary nature of AI uniquely positions it to address sustainable development challenges to further accelerate achieving the 17 SDGs during this Decade of Action. But how? The Lab participants have an answer.

AI for good health and wellbeing. Many participants shared how AI could effectively trace and monitor the spread of COVID-19 to reduce the risk of infection. An important consideration was how AI could be better integrated in developing countries where it might not be as easily accessible.

AI for quality education. With the global crisis underway, questions and concerns are swirling in the heads of the Lab participants. "What if we're jobless in a few years? Do we have to upgrade our skills?" They voiced. AI Labs like this one might just well be the first step towards answering these perplexities.

Click to open the Miro Virtual Board

THREE EXPERTS DEMYSTIFY
AI'S MYTHS, GOVERNANCE, AND DEMOCRACY.

Demystifying the world of Artificial Intelligence (AI) engages thinkers, creators, and innovators far and wide. There is no universal application or interpretation of AI's potential. **What intrigues you?**

In the first block on Demystifying A, participants attended a virtual panel featuring three unique AI perspectives from international speakers. The result was thought-provoking.

8 myths and misconceptions about AI

Imagine starting your career in philosophy, would you have ever thought of becoming an AI expert? For Daniel Leufer, this is his reality. As a Europe Policy Analyst at Access Now in Brussels he dedicates his time debunking eight AI myths.

"A group of us that work with AI policy brainstormed a list of the most annoying things we hear about AI on a regular basis," he shared. Although AI has the capacity of helping the greater good, it could also do harm. It's vital to understand it well and bust some of these myths.

He further expanded upon two of these myths: AI has agency and AI can solve any problem. Media and headlines tend to glorify the successes and agency of AI. "**Human agency is being masked**," he emphasized.

AI is also depicted as a one-stop solution for a multitude of issues, yet it is not all-encompassing. "Machine learning picks up patterns in data," Daniel explained, "But it's not good at predicting complex social phenomena, like criminality."

AI governance: A feminist analysis from the Global South

The next pitch came from Nandini Chami, the Deputy Director at IT for Change in Bangalore. She brought a distinctly fresh and diverse perspective to the AI discussion, presenting a feminist-oriented argument from India.

Governance of the new emerging economic order is built on data, as a result it has become of utmost concern. Nandini explored a plethora of dimensions regarding governing AI.

"What would a feminist governance framework for AI look like?"

When addressing AI and human rights, she stressed the gender bias in data and algorithms. While discussing the automated public sphere, she noted the continued spread of sexist hate speech and disinformation. AI governance calls for an inclusive and conscious approach.

How do we democratize AI?

To wrap up the panel, the third speaker further stretched the range of disciplines involved. A data scientist and economic sociologist, Christian Resch offered another vision for how we could make AI more democratic through his work with FAIR Forward – Artificial Intelligence for All in Germany.

Increasing access to AI is at the heart of FAIR Forward's mission. Christian explained how **local development of machine learning applications could solve local problems** in this global initiative. Their areas of action include strengthening local skills and capacity, improving access to training data and AI technologies, and developing policy frameworks ready for AI.

"Use technology to further the public good."

He finished his talk with a call to action: "Don't be mystified!" AI can become inherently social. He offered some key actions: engage with institutions for public good, foster communities for local development, or create your own training data. **Use AI for good.**

With every genuine advance in the field of 'artificial intelligence,' we see a parallel increase of hype, myths, misconceptions and inaccuracies. These misunderstandings contribute to the opacity of AI systems, rendering them magical, inscrutable and inaccessible in the eyes of the public.

News   About

- representing
- defining
- governing
- using

AI myths

AI has agency

AI = shiny humanoid robots

Superintelligence is coming soon

The term AI has a clear meaning

Ethics guidelines will save us

We can't regulate AI

AI can be objective/unbiased

AI can solve any problem

Copyright

A screenshot from AI Myths, visit the website to see more interesting arguments at https://aimyths.org

Do's

Be careful with what "AI" is

Make clear what role humans have to play

Emphasize the narrowness of today's AI-powered programs

Avoid comparisons to pop culture depictions of AI

Make clear what the task is, precisely

Call out limitations

Present advancements in context

Dont's

Imply autonomy where there is none

State programs "learn" without appropriate caveats

Cite opinions of famous smart people who don't work on AI

Ignore the failures

BUILDING AI THROUGH OPEN SOURCE COMMUNITIES

How open source software contributes to the common good

Imagine a world where the tools to create platforms like Firefox, Trello, and Hubspot are at your fingertips. That world is already a reality.

That's right, **we're talking about open source software**! An open source license allows software to be freely used, modified, and shared. These programming codes are developed by academics, researchers, and enthusiasts, forming a community around open coding languages.

The community of participants involved in the Leading with AI: Ignite and build your AI-driven ideas Lab analysed, questioned, and discussed to what extent the open source community building AI is actually "open." This Lab, co-hosted by GIZ's Global Leadership Academy and the International Training Centre of the ILO, is currently in its second phase Prepare for an AI Future.

Open source software is more common than you might think. Scikit-learn, TensorFlow, Apache Mahout, and others are built using open coding languages like Python and R. Even Google uses and supports open coding languages like Python and R community initiatives.

Scaling up initiatives

For Estrella, she sees open source as a means to address migration challenges. "This could be replicated in about 170+ countries," she affirmed. Facilitating a shared platform would benefit the millions of migrants, their families, and communities worldwide. Open source for **the common good.**

Throughout the AI Lab, participants support each other and offer guiding questions. "Since your project is on migrants

and migration data, how would you protect sensitive and potentially identifiable data of migrants?" Probed Kai-Hsin, stimulating the next iteration round.

The rise of open-source software

Click to watch *The Rise of Open-Source Software* video from CNBC on YouTube

The applications range wide and far. Initiatives like Open Data, Open Government, Open Science, NumFocus, and Open Street Map depict the versatility of open source software. Dig in to participant exchanges revolving around open source software.

Open source is not a democracy

This phrase triggered many reflections. "The openness of something often does not change the fact that many do not have access or the capabilities to use the open source software," highlighted Amoaben.

How could "open" become accessible?

Brian shared his thoughts: "While promoting the use of AI and open source software, we should support policies that **increase the reach of technology and software engineering** for the under reached and unreached."

Reducing the digital divide

Accessibility and inclusion are at the core, the impact could be exponential, but the model needs a redone. "Open source helps bring everyone on board," envisioned Chu. "It could be **a springboard for radical innovation**, as others may bring mind blowing-proposals to an already existing system," he finished.

Practical solutions also surfaced. Jumatil sees a clear opportunity for intervention: "In order for open source to narrow the digital divide, we need to invest in education." Building capacity and sharing knowledge will bridge this gap.

HOW REAL-WORLD BUSINESSES MAKE USE OF AI

During his presentation, Alex Shee, Senior Director of Partnerships at Samasource, highlighted the fact that AI is impacting every industry and can be used as a force for good. Just among the others, he explained the example of Amazon: its use of the **interconnection of AI solutions** makes Amazon AI impact so huge.

Using business knowledge for open AI-deas

Tatjana Samsonowa, founder of IPERF International Institute of Research Performance and Innovation Management, focused her intervention on Business model templates for AI solutions.

As start-ups, spin-offs and existing corporations increasingly transfer AI research and technology into commercial products and services, **AI engineers can benefit from focusing and positioning their work within the overall strategy** of such ventures.

Her research highlights the most **frequently used elements** in each block of the business model canvas: common characteristics in the value propositions, multi-sided platforms in company segments, automated service in customer relationship, social networks in channels, investors in key partners, R&D in key activities, human resources in key resources and Software-as-a-Service in revenue.

The big picture: positive impact of AI in all fields. That complemented the conversation by David Galipeau, Partner, SDGx Singapore, Director, Yunus Near Future Lab.

Just to list some…

In the medical field: AI solves clinical and behavioural health problems; identifies new drug solutions, selects and monitors clinical trial candidates, predicts risk of disease or addictions.

Furthermore, **AI is powering the green energy revolution**; addresses challenges of renewable energy (supply, demand, ebbs and flows), AI is a public good for energy, water and natural resource management; improves climate change through simulations, monitoring, measuring and management; systems create volumes of data that is unintelligible without the support of AI.

With all these and more opportunities and positive impact of AI in mind, David Galipeau admitted that the **transformative power of AI generates, at the same time, challenges of transparency, trust and security.**
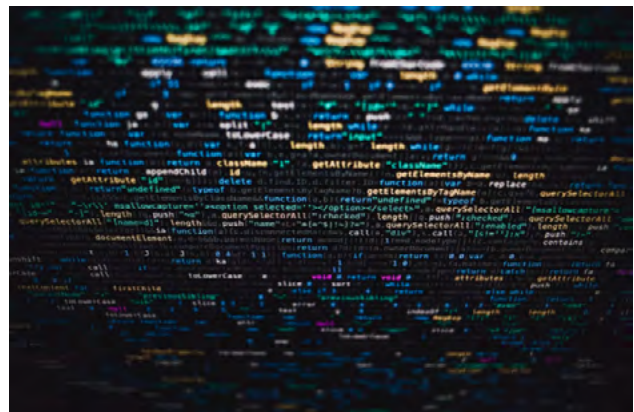
Let's use AI for good!

The third block on AI applications focused on ideation of AI-deas. While continuing the coffee break sessions on specific challenges, individuals and small groups developed their AI-deas along an AI business canvas, using their peers also to test and re-iterate through peer-support sessions.

In November it culminated in a session to pitch ideas and celebrate. Read some examples in the following AI-dea section.

AI-DEAS

AI-DEAS

Specific challenges, different perspectives, insights in the broad discourse on the technological develop-ments and its limits have been discussed, individual and group ideas iterated and pitched at the final session. Read some of the ideas here.

BETTERKNOWLEDGE4ALL

MARIA ROSA
GAMARRA CESPEDES
BOLIVIA

Project Manager
BetterKnowledge4all

With a solid foundation in technology-based knowledge management, María Rosa Gamarra Cespedes' team set out to achieve more effective capacity building processes in companies.

PROJECT SNAPSHOT

"We strongly believe that AI offers us the opportunity to promote the use of more relevant content with no constraints but in a deeper way from the web, creating new knowledge with more new perspectives from the empiric reality to integrate it to formal knowledge and not only vice versa. We want to actively promote not only that companies develop the capacities to overcome economic challenges, but also to include environmental and social challenges in their performance. We know that a radical and structural change in the way we approach production is necessary to promote greener economies and the innovative use of technology. Our project has a technological base, but also an innovative approach to economic, environmental, and social development."

BACKGROUND

We have developed a pilot experience of three years promoting Sustainability (in which we have been trained at the University of Leuphana in Germany, one of the three world leaders in this field, and which has hired us to develop this topic in regional development projects in Latin America). Additionally, taking Capacity Building (focusing Knowledge Sharing) into consideration, demonstrating a significant growth with sponsors and customers in the development sector in Latin America. With this in mind, we have the ability to support the Sustainability Chain, researching and participating in the development of products such as thermoregulatory textiles, bioenergy (we have a Master in Green Chemistry in Spain, for this purpose). We are qualified as eLearning Expert at the University of Furtwangen

in Germany, as Trainers of Trainers both in Germany and Spain, but also as experts in: Sustainability, Environmental Technology and Cleaner Production Management, Development Project Management and Experts in Conflict Management in Germany; as well as integrators in technology for education and disruptive innovation in energy, water and waste management for industry in Catalonia, Spain.

THE CHALLENGE

We have worked in these fields (mainly supporting German organizations), our aim nowadays is to **increase and strengthen our model to achieve greater impact**. We currently participate as peer reviewers of scientific articles on the use of renewable energy in Latin America (Enerlac – Latin American Energy Organization), we support the development of the Semantic Web, Linked Data and Open Data participating in some W3C activities, Internet Society Chapters Catalonia, Argentina, etc.

THE AI SOLUTION

Given our experience joining different fields (technology-based knowledge sharing with green growth, technology-based knowledge management with sociology or political economy, etc.; supported in one way or another, by international organizations such as the Inter-American Development Bank, the World Bank, etc.) we want to achieve more effective and rapid capacity building processes (and knowledge sharing, particularly using dialogue tools) in companies, whether new or consolidated, through two platforms powered by AI, one to collaborate with other institutions and another for training. The second one will use our already developed competency-based management model from the perspective of learning processes (since our offer will be focused on enhancing human talent, from the workplace and not from conventional training). We strongly believe that AI offers us the opportunity to promote the use of the more relevant content, with no constraints but in a deeper way from the web, creating new knowledge with

more new perspectives from the empiric reality to inte-grate it to the formal knowledge and not only vice versa. As eLearning Senior Project Managers, we designed several projects focused on Sustainability issues, to strengthen the link between knowledge and public policies, expert and non expert knowledge, etc. and we finally arrived at the development of a strong Knowledge Sharing concept. Because our focus is on Sustainability and technological transformation within productive processes, we want to promote actively not only that companies develop the capacities to overcome economic challenges, but also to include the environmental and social challenges in their performance (not from a philanthropic perspective, nor as accessory activities, but by integrating the science of sustainability). We know that a radical and structural change in the way we approach production is necessary to 0promote greener economies and the intensive use of technology. And in this sense, our project has a technological base, but also very innovative approaches to economic, environmental, and social development.

FURTHER REQUIREMENTS

Our work has initially been developed using Open Source or free technological resources. When we realized that this was not enough to cover all the needs of our processes, which are highly innovative in the way they create new knowledge and knowledge sharing, we began to enter to the world of programming. Currently we work mainly with Python, but also with other languages for web development, and we are currently working on the ontologies that will configure our workspaces. Specifically we need: 1) To mature our programming processes in Python and Machine Learning, 2) To integrate Artificial Intelligence in our platforms.

COMMUNITY OF PRACTICE ON
AI-BASED JOBS & FUTURE WORK AND SKILLS

POOJA GIANCHANDANI
INDIA / GERMANY

Founder Curator
theskillspundit.com
https://linkedin.com/in/poojagianchandani

Motivated by the digital disruptions triggered by the COV-ID-19 crisis, Pooja Gianchandani questioned how the future of work and skills will be impacted. Discover how her project targets this unprecedented reality.

PROJECT SNAPSHOT

"The concept seeks to create an AI-based Community of Practice (CoP) to promote experiential learning among institutions, thinkers, and policymakers. This futuristic CoP intends to serve as a bridge between experts and practitioners from industry, where the changes in the world of work are occurring, and institutions, who are responsible for preparing the workforce. The CoP aims to conjoin the demand-supply side so that both can intuitively prepare for the impending changes. The potential impact of such a CoP could improve the responsiveness of the TVET and skills systems at the industry and sector levels enhanced the employability of learners, and increased the capacities of institutions to implement these changes at the pace and scale required."

THE CHALLENGE

Self-driving care, machines that read X-rays, and algorithms that respond to customer-service inquiries, these are just a few of many AI applications that could be widespread by 2030. Transitions in the world of work are not new and have had a direct impact on work and human-capability. Although there is this impending fear that this would make some existing current jobs redundant, there is a far idea of which new jobs will be created in the process. This AI-led change in the world of work has been variously discussed – at policy fora, online webinars, business board rooms and some businesses were preparing for it already. But a large chunk

of economy still operates in the small and medium business sector and/or in the informal sectors. While, the big companies and corporates have already gearing up for these shifts, the others are far from ready for the impending changes. Therefore, there is a need for more focused dialogue and exchange on AI – its impact on the jobs of the future? How prepared are the existing education and training institutions to impart these trainings? At what speed can the practitioners be upskilled/retrained? The ongoing digital disruptions, especially during the COVID pandemic have leapfrogged us into the world of new work. This creates an unprecedented demand for new skills for workforce both new and old. Future of Work is now. To unpack and understand some of these realities there is a need for dedicated Community of Practice on New Jobs & Future Work and Skills on AI , powered by AI.
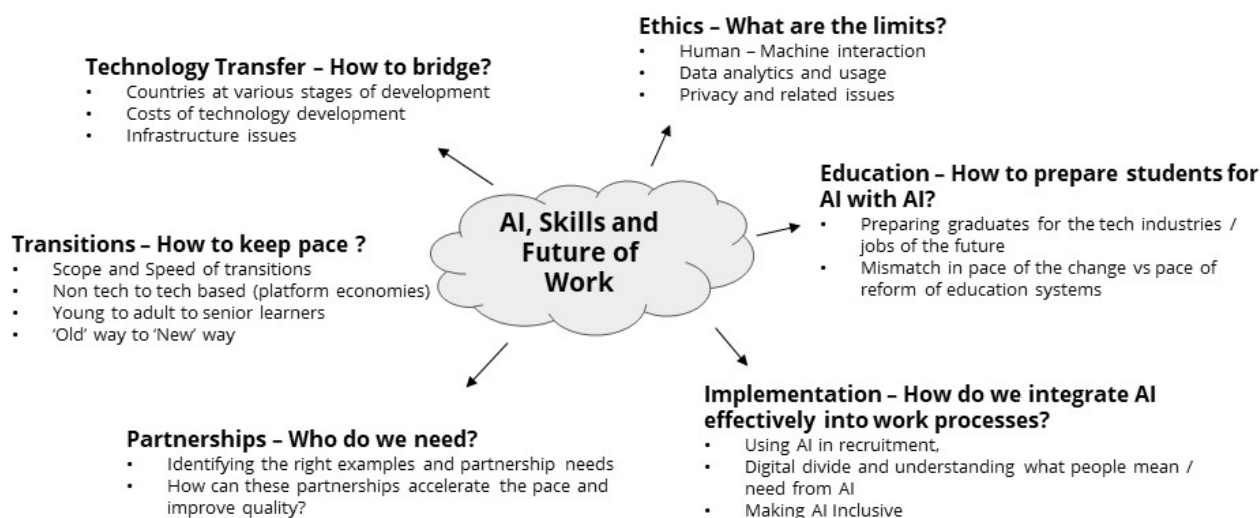
THE AI SOLUTION

The concept is still in ideation and prototyping stages, seeks to create an AI based Community of Practice to promote experiential learning among institutions, thinkers and policy makers. This futuristic COP intends to serve as a bridge between experts and practitioners from industry (where the changes in world of work are occurring) and institutions (who are responsible for preparing the workforce for it). The COP intends to matchmake the demand – supply side such that both can intuitively prepare for the impending changes. The potential impact of such a COP could be improved responsiveness of the TVET / Skills systems at industry / sector level, enhanced employability of learners and increased capacities of institutions to implement these changes at a pace and scale required.

FURTHER REQUIREMENTS

Mapping of the existing landscape of services / solutions in connection to the main topic and sub-themes. Identification of the right partners: Institutions, Companies, Users, AI Experts, Research Institutions, Tech providers, Public agencies like policy makers, sector councils, apprenticeship networks; Technical Colleges etc. Subject Matter Experts willing to partner in the creation of the COP and implementing some of the proposed activities including Practitioners such as Teachers, trainers, MOOC facilitators;

Learners (at schools, in-company), Companies , especially SMEs in local areas who are implementing AI driven changes. Technical and Financial Resources: Investors to help develop and maintain an – open, free for all, easy to use platform for users of all backgrounds and countries. Resources are also needed for research prototyping, testing and launch of the platform. Some manpower and resources will also be needed for maintenance and sustenance of the effort.

Key themes for the COP on New Jobs & Future Work and Skills

Technology Transfer – How to bridge?
- Countries at various stages of development
- Costs of technology development
- Infrastructure issues

Ethics – What are the limits?
- Human – Machine interaction
- Data analytics and usage
- Privacy and related issues

AI, Skills and Future of Work

Education – How to prepare students for AI with AI?
- Preparing graduates for the tech industries / jobs of the future
- Mismatch in pace of the change vs pace of reform of education systems

Transitions – How to keep pace ?
- Scope and Speed of transitions
- Non tech to tech based (platform economies)
- Young to adult to senior learners
- 'Old' way to 'New' way

Partnerships – Who do we need?
- Identifying the right examples and partnership needs
- How can these partnerships accelerate the pace and improve quality?

Implementation – How do we integrate AI effectively into work processes?
- Using AI in recruitment,
- Digital divide and understanding what people mean / need from AI
- Making AI Inclusive

AI Leadership Lab – Coffee Chat AI, Skills and Future of Work   theskillspundit.com

COVID-19 CONTACT TRACING

JUM'ATIL FAJAR
INDONESIA

Head of Medical Care Department
RSUD dr. H. Soemarno Sosroatmodjo Kuala Kapuas

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With a global pandemic currently ongoing, Jum'atil Fajar seized this opportunity to investigate how AI could assist in contact tracing positive patients and notifying close contacts. Dive into how this could be possible:

THE CHALLENGE

When someone is confirmed as positive for COVID-19, then health workers must carry out contact tracing. This activity was carried out to trace anyone who was in close contact with this confirmation patient. The problem is that not all contacts in the places where this patient has visited are known who are the close contacts.

THE AI SOLUTION

One of the artificial intelligence capabilities that can be used to solve the above problems is object recognition or machine vision. With this capability, combined with a global positioning system (GPS) and credit card usage data, we can detect someone's whereabouts. With the help of CCTV in public places, we can detect who are the people who are in close contact with the confirmation patient.

FURTHER REQUIREMENTS

Indonesia already has biometric data through recording identification cards. What is very lacking is the presence of CCTV in public places and the connectivity of the CCTV. During a pandemic, people generally wear masks. Then the machine must be taught again to recognize the face that is using a mask.

See related image to the right

AI FOR PUBLIC PROCURE-MENT IN KOSOVO

ABETARE PREBREZA
KOSOVO

Municipality Procurement Adviser
USAID KOSOVO

As a PhD student and public procurement advisor and trainer, Abetare Prebreza aspires to link her professional path to the developments in the world of AI, specifically in Kosovo. Take a look into how:

PROJECT SNAPSHOT

"AI for public procurement will help to know the other side of data and will better perform the designed empathetic procurement. As a result, this will lead to better jobs for institutions and contractual authorities as well as for economic operators and companies. This will be made possible through official datasets, lists of indicators, helplines, laws, and regulations."

Image from Jum'atil Fajar – COVID-19 Contact Tracing

HUMANITARIAN AID DEPLOYMENT

ANTHONY MUTUA MALONZA
KENYA

Ewaste Coordinator
We Hub Victoria Ltd
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When crises hit, food sources, people's health, and access to water may all be at risk. Anthony Mutua Malonza envisioned a solution in which AI becomes a mechanism for aid coordination and implementation. Check out his idea:

PROJECT SNAPSHOT

"It takes time for government agencies and NGOs dealing with AID to the affected population to implement action to deal with a humanitarian crisis. AI could be a centralized console where all agencies can view and coordinate AID activities, a sort of a dashboard. This could take the shape of databases linking NGOs and government agencies. Or, an app that can function across timezones to connect all agencies so they can share information on humanitarian aid issues and best practices to better serve humankind."

THE CHALLENGE

During the Humanitarian crises such as civil war, or natural disasters. There is a lot that happens fast. People are displaced from their homes hence lack of shelter People go hungry due to a lack of access to food. Food sources are cut off, routes to food sites, shops may be cut off. Lack of safe water. This translates to water-borne diseases that hit the displaced populations. All the above including more may hit the affected populations. At times it takes time for government agencies / NGOs dealing with AID to the affected population to implement action to deal with humanitarian crisis. This could be a factor of lack of proper information on the actual situation on the ground. Similarly, this could arise from a lack of coordination from key institution that holds/ could have access to data that would make AID to affected communities easier and faster hence making an impact in saving lives. Challenges addressed lack of swift

coordination between AID deployment agencies lack of information on the situation of the humanitarian crisis on the ground, which may water down efforts for AID deployment.

THE AI SOLUTION

With the previously mentioned scenario in mind a centralised console or command centre can be developed using AI technologies for all agencies to view and coordinate AID activities. A common dashboard that helps make the best use of the resources available to deploy them efficiently where they are needed the most.

FURTHER REQUIREMENTS

1. Linked databases between NGOs and Government Agencies
2. An easy to use app that can function without the national cluster boundaries, across timezones and countries, connecting all agencies.
3. Openly share information on humanitarian AID issues and best practices to better serve humankind.

DESTIGMATIZING MENTAL HEALTH WITH AI GAMING TECHNOLOGY

TANYA MARINGO
KENYA

Founder and Executive Director
Blink International
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In Kenya, a great number of individuals suffer from mental illnesses yet never receive proper treatment. Kenyan Tanya Maringo imagined an entry point for AI to alleviate this disproportionate number of untreated patients. Read more about her vision:

PROJECT SNAPSHOT

"If practitioners can monitor their patients remotely through a fun and engaging platform, early detection of relapses and self-harm can be avoided. A game incorporating AI, voice recognition, and mood monitoring technology could be the answer. In this way, we can create a comprehensive information system that can improve the management of a patient's case from intake to the post-recovery after discharge in real-time. This model and platform can be used by rural community health workers to help in early diagnosis and to address insufficient access to mental healthcare for children and youth. The whole platform will use AI features to identify the mental health issues, provide recommendations, and refer cases to the nearest healthcare facilities or aid workers upon identification of the different conditions."

THE CHALLENGE

As a continent, Africa performs relatively poorly in the number of psychiatrists, patients with mental illness, and the coverage of outpatient facilities. There is a shortage of mental health clinicians, with some areas lacking any licensed mental health providers. These disparities often disproportionately impact people living with lower incomes, which often includes adolescents, the elderly, and ethnic minorities, amongst other vulnerable populations. Added to this crisis is stigmatization, which discourages people from seeking clinical help. In my country Kenya, the situation is no different. The proportion of Kenyans who receive treatment for mental health problems is low, partly because of a few mental health specialists, a lack of awareness, finances and stigma associated with mental health illnesses. Mental health care services are available in only 29 of 284 hospitals rated level 4 and above. The Kenya Mental Health Policy (2015–2030) states that 1 in every 4 Kenyans will suffer from a mental illness in their lifetime, and 5 out of 6 patients will not receive treatment. Unfortunately, in far-reaching areas psychosocial support is even less available and therefore not accessible to a large per cent of the population.

THE AI SOLUTION

The first component of the problem Blink will address is the lack of quality monitoring and response tools for at-risk patients who have already accessed health services (such as those suffering from substance abuse and depression) and have been discharged from mental health services. Mental health practitioners often do not use innovative ways to monitor their patient's post-therapy/rehabilitation. Post relapse emergencies are frequent yet avoidable. We believe that if practitioners can monitor their patients remotely through a fun and engaging platform (such as a game with AI, voice recognition and mood monitoring technology) early detection of relapses and self-harm can be avoided. In this way, we can create a comprehensive information system that can improve the management of a patient's case from intake to the post-recovery after discharge in real-time. The benefits of this programme will be convenience and privacy in accessing mental healthcare.

DESTIGMATIZING MENTAL HEALTH THROUGH AI IN GAMING TECHNOLOGY

THE TEAM

Blink International (Tanya Maringo) — Kenya
CyberSaathi (Nappinnai) — India

THE CHALLENGE WE ARE ADDRESSING

The first social problem we seek to address is lack of adequate access to mental healthcare for vulnerable and marginalised children and youth. We will use gaming as a platform to identify mental health issues, provide recommendations and refer cases to healthcare facilities upon identification. The second and underlying issue that will be addressed is the proliferation of gender stereotypes to children and youth through gaming platforms. We will create a game that is gender inclusive and non-biased that will skillfully change the conditioned minds of children across Africa.

HOW ARE WE ADDRESSING THIS?

In Partnership with development experts and IT stakeholders Blink will develop an interactive prototype of a video game contextualised to characters that increases access to monitoring mechanisms, with essential AI features that will identify and provide recommendations on key mental health challenges. Our objective is to use gaming as a strategic therapeutic tool in response to SDG 3 (Good health and well-being) aggression through gaming.

WHAT RESOURCES AND CAPACITY COULD SUPPORT OUR WORK?

AI experts.
Mental health workers including neuroscientists.
Gaming Software developers.
Data collection experts.
Donors and Investors to support business model

Furthermore, this model and platform can be used by rural community health workers to help in early diagnosis and to address insufficient access to mental healthcare for children and youth. The whole platform will use AI features to identify the mental health issues, provide recommendations and refer cases to nearest healthcare facilities or aid workers upon identification of the different conditions.

FURTHER REQUIREMENTS

To achieve the above prototype Blink will need the following: Software developers including UX designers AI experts for monitoring and evaluation of game usage and profiles. Donors and Investors to support business model which we have divided into 3 phases. Phase 1 (development of prototype over the next 3–4 months, targeted first towards the African market). Will include market assessments, data collection on user experience. Phase 2 conduct a testing lab and release of the prototype to the market. Phase 3 Scaling up of the gaming app within the market and expansion into other African markets.

AUTOMATIC LOCAL LANGUAGE TRANSLATION WITH AI

BRIAN KAGIMU
UGANDA

General Safety Inspector (Training)
Ministry of Gender, Labour and Social Development
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Access to quality educational videos is limited for many students who speak minor, local languages. To remediate this inequality, Kagimu Brian Vincent ideated an AI solution for improved education. See how:

THE CHALLENGE

In line with SDG 4, students in developing countries need to access quality education. Unfortunately, most educational content on Youtube or Khan Academy, though they provide subtitles in many languages, these are limited to the major languages with many speakers. This means that many languages with few speakers do not have an alternative.

THE AI SOLUTION

The goal is to contribute to open datasets of local languages like Luganda in Uganda. This way native speakers can hear educational content in their mother tongue. This will be accomplished through natural language processing. In line with SDG 4, students in developing countries need to access quality education. With most educational content limited to the major languages, many languages with few speakers do not have an alternative. This would bridge that gap.

FURTHER REQUIREMENTS

Open datasets in the local languages of Uganda

INCLUSIVE AI: ADDRESSING THE GENDER INCLUSION GAP

SYLVIA MUKASA
KENYA

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GlobalX Innovation Labs
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Women are under-represented in the field of AI. As a way to increase women in tech leadership roles, Sylvia Mukasa aspires to create a female-oriented platform to augment their participation. Take a look at her vision:

PROJECT SNAPSHOT

"We need to provide a platform that aims to get more women into AI through the provision of targeted skills and training programs, access to job opportunities, peer-peer learning, workshops, webinars, and other networking opportunities. To make this happen, AI Lab members and partners would assist in project development. Partners will be brought on board to play different roles in making the concept work. Finally, AI content that is ready to be delivered to the target audience and trainers will be consolidated to best support these women."

THE CHALLENGE

Women are under-represented in the field of AI. The current data on the state of gender diversity in the AI field is dire, both in industry and academia. The 2018 Artificial Intelligence Index reports 80% of AI professors are men. A report produced by the research firm Element AI found that only 18% of authors at the leading 21 conferences in the field are women. The state of racial diversity in AI is even worse. Only 2.5% of Google's full-time workers are black, and 3.6% latinx, with black workers having the highest attrition rate of all racial categories. Facebook is not much better: the company reported that with 4% black workers and 5% 'Hispanic' workers in 2018, the company's diversity is improving. Microsoft reflects similar levels as Facebook, with 4% black workers, and 6% Latinx workers.

Inclusive AI: Addressing the Gender Inclusion Gap

PROBLEM

Artificial Intelligence (AI) technology is changing our world, but those producing these cutting-edge systems are predominantly male. Diversity & Inclusion is key to the problems we solve.

The Team
Lead: Sylvia Mukasa, GlobalX Innovation Labs (Kenya)
innovationlabs@globalxinvestmentsltd.com

The Challenge
The current data on the state of gender diversity in the AI field is dire, both in industry and academia.
The 2018 Artificial Intelligence Index reports 80% of AI professors are men. According to Nesta, only 11.3% of Google's employees who have published their AI research on arXiv are women, 11.95% of Microsoft employees and 15.66% of IBM employees. It also shows that women are more likely to consider societal, ethical and political matters in their work on AI. Research by Element AI estimates that only 12% of leading machine learning researchers were women and; only 18% of authors at the leading 21 conferences in the field are women. Based on this, we need to have better representation of women both in Tech leadership and other AI roles by taking measures such as addressing the gender skills gap, reducing recruitment biases etc .This will not only have a positive effect in Diversity & Inclusion, reducing gender-related bias in AI products/solutions but also in Inclusive AI policy formulation at leadership level.

How are we addressing this?
- Provide a platform that aims to get more women into AI through the provision of targeted skills and training programs, access to job opportunities, peer-peer learning, workshops, webinars and other networking opportunities.
- Target: Women who would like to enhance their skills for the job market and get employment in AI or start their businesses
    Organisations that are working towards increasing the number of women in the AI workforce through employment, skilling/up-skilling, policy formulation and diversity & inclusion.
- Key Partners: ITCILO AI Lab Partners, ITCILO AI Lab Members, Investors, Universities/Academia, Leading IT firms/Private Sector, Developers, Governments , NGOs, Civil Society

What resources and capacity could support our work?
- Funding
- Government & Industry/ private sector connections
- Tech & Entrepreneurship Ecosystem Players
- Other relevant stakeholders.

This information is from these companies' websites. So you can imagine how many of these are women as race compounds the situation! Based on this, we need to have better representation of women both in Tech leadership and other AI roles by taking measures such as addressing the gender skills gap,recruitment biases etc. This will not only have a positive effect in reducing gender-related bias in AI products/solutions but also on Inclusive AI policy formula-tion at leadership level.

THE AI SOLUTION

Provide a platform that aims to get more women into AI through the provision of targeted skills and training programs, access to job opportunities, peer-peer learning, workshops, webinars and other networking opportunities.

FURTHER REQUIREMENTS

AI Lab members and partners input in project development e.g. design and implementation in various ways. Bringing partners on-board who will play different roles in making the concept work e.g. AI ecosystem players, investors and granters/funders for AI ideas from Hackathons conduct-ed, developers,private sector,academia,governments,re-search orgs,NGOs,development sector, AI content that is ready to be delivered to target audience and trainers for the content. Funding to work to certain concepts such as webinars,conferences, advertising, content development, AI accelerator projects and other content development,train-ing,implementation and other admin work.

FROM AI SKILLS DEVELOPMENT TO NATURAL TALENT: A TOOL FOR DEVELOPMENT AND LEARNING

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For many, school education remains traditional and even dull. The focus isn't necessarily on passion or personal development, but for Doris Pololi AI could be a way forward to understand and develop talent. Investigate the solution:

THE CHALLENGE

In today's society, the method of teaching starting from school is often traditional. Although over the years there have been many attempts to make teaching more interactive and interesting, it is notable that there are still some limitations. Even just thinking back to the times when I went to school, I don't remember any of my classmates being particularly enthusiastic or passionate about most of the subjects taught. Although Maria Montessori, with her theory, had already identified important key points in developing talents from childhood, it seems that there is still a long way to go to renew teaching in schools. Once completed school, students often choose to go to the university more out of habit than to pursue a passion.

Often due to certain social and economic conditions, the choice of university tends to fall back on faculties that later give more chances to find a job. As a consequence, once the university is finished – which is often as theoretical –, there is a tendency to find a job inherent to the course of study, that over time turns out to be unsatisfactory and unmotivating, leading as well to a lower commitment by workers to the organizations in which they work.

Nevertheless, each of us has strengths, hidden passions and sometimes never discovered talents. If we all develop our strengths in the best possible way and apply our passions in the workplace, we will not only improve our personal lives, but also the society itself. New technologies can also support us: what if Artificial Intelligence would help us understand our talents and develop them? If AI is already being used extensively by leading multinationals to understand our preferences for marketing and business purposes, why not to apply such a methodology for personal development?

THE AI SOLUTION

The idea is to develop a tool linked to other apps and search engines to identify the preferences of each user, preferences that will then be used to create a path of personal development and learning according to each user's passions, which will be derived from the AI through the analysis of data. The learning method is designed to be continuous, in order to help the user to develop increasingly her or his potential in an independent and autonomous way.

The final goal is to make the user aware of his capabilities and strengths, in order to direct her/him towards an educational or professional path related to his/her interests and passions. Ultimately, this tool is meant to be accessible to everyone, fostering inclusion in order to improve each individual's well-being and sense of fulfilment. In the broader spectrum, this would allow to obtain benefits not only in terms of personal growth but also to create a more dynamic and competitive economy.

FURTHER REQUIREMENTS

Need to have technical skills to improve it – get in touch with developers and AI experts that can provide me with further suggestions on how to implement it.

AI FOR GENDER FRIENDLY CITIES

ELSAMARIE DSILVA
INDIA

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A great percentage of gender-based violence takes place on transportation or in urban settings. ElsaMarie DSilva imagines a world in which this obstacle is reversed and women can navigate cities in peace and safety. Explore her idea.

"Our proposal is to have an urban intelligence dashboard which builds on the data from the Safecity platform on sexual and gender-based violence. By using several data sets crowd-sourced from social media and official data-sets, we can map these against indicators for safe and inclusive cities with a gender lens. The dashboard can be designed with empathy and ethics keeping in mind the survivors' needs. With machine learning and AI, we can set alerts for civic authorities and police to take action but also for the community in neighbourhoods to find solutions."

THE CHALLENGE

Women and girls constitute 50% of the population, yet most cities and transport don't necessarily take into account their needs. For example, sexual and gender based violence is a major problem and women's mobility and opportunities are often adversely impacted due to the lack of safety. In India, there is a rape that takes place every 18 minutes according to the National Crime Research Bureau.

In a survey by ICRW, nearly 75 percent of women and girls surveyed said they had faced sexual violence in their own neighbourhoods. Nine out of 10 reported experiencing sexual aggression or violence – from obscene comments, to being groped, stalked or sexually assaulted – in a public space in their lifetime. Six out of 10 reported this for the last six months preceding the survey.

Nearly 65 percent of the women and girls said they feel fearful or extremely fearful when they go out alone at night. This fear of being violated is real but normalised. It holds women and girls back from exploring their potential

and seizing opportunities. Many of them do not make any official complaint because of the taboo, stigma and shame associated with these experiences that put the burden of blame on the victim. This lack of data makes the issue „invisible", but it is important we find effective solutions as it is not only a rights issue but also an economic and well-being issue.

The McKinsey Global Institutes's 'Power of Parity: Advancing Women's Equality in Asia Pacific' report (2018) states that in a best-case scenario, India could add US$770 billion to its GDP if it succeeded in advancing women's equality. Violence against women and girls was listed as one of the barriers that prevented this advancement.

THE AI SOLUTION

Our proposal is to have an urban intelligence dashboard which builds on the data from the Safecity platform on sexual and gender based violence. By using several data sets – crowd-sourced, mined from social media and official datasets, we can map these against indicators for safe and inclusive cities with a gender lens.

The dashboard can be designed with empathy and ethics keeping in mind the survivors' needs. With machine learning and AI, we can set alerts for civic authorities and police to take action but also community in neighbourhoods to find solutions. Note – Safecity is a crowd mapping platform that was established in December 2012 as an immediate response to a horrific gang-rape in India. Since then it is the largest crowd-sourced database in the world on stories of sexual and gender based violence.

FURTHER REQUIREMENTS

Funding – USD 300000 which will be largely for tech development and data analytic city partner – to implement the project with. Partners – other partners who can help shape the project further.

RESPONSIBLE ASSET OPTIMIZER

MOHAMMED ABOUD
EGYPT

Technical Manager
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Numerous industries face issues of efficiency, energy use, and cost optimization. Nevertheless, Mohamed Aboud spotted a potential AI-based solution to address these data collection challenges. Read on to find out:

PROJECT SNAPSHOT

"Responsible Asset Optimizer is an AI solution to optimize the performance of heavy assets for helping the heavy industries in solving their challenges within the context of responsible manufacturing practices involving improvements in productivity, energy consumption, cost optimization, and environmental footprint. The inputs of the solution are the plant data structured and sorted to cloud, design, and benchmark data. The output entails customized machine learning models for optimized operation parameters of heavy assets and autopilot mode for optimized and verified models. This AI solution based on a build – operate – transfer service would ensure a long life of healthy system operations and plant team upskilling."

THE CHALLENGE

The heavy industries are facing challenges in improving their performance in term of productivity, energy consumption, cost optimization and environmental impacts. Most of the heavy industries have been invested in technology systems for data collection and information gathering from the manufacturing system to be used by operators for improving performance. The amount of the data is huge and not well utilized, and here is the role of AI to play. The AI solution can used the huge data collected in addition to the users experience in building customized machine learning models for achieving the manufacturing targets in facing the challenges with improvements in energy, cost, production, and environmental performance.

THE AI SOLUTION

Responsible Asset Optimizer; is an AI solution to optimizing the performance of heavy assets for helping the heavy industries in solving their challenges within the context of Responsible Manufacturing practices involving improvements in productivity, energy consumption, cost optimization, environmental footprint. The inputs of the solution are the plant data structured and sorted to cloud, design and benchmark data, operators, and engineers set points and response, and Automation systems flow. The Output is Customized Machine Learning Models for optimized Operation parameters of heavy asset and Autopilot Mode for Optimized and Verified Models AI solution Based on (Build – Operate – Transfer) service to ensure long life of healthy system operations and plant team upskilling.

FURTHER REQUIREMENTS

The Key elements required are training and staffing (in progress), with start up investment for prototyping and pilot project for publishing the MVP of the solution.

AI IN DIPLOMACY

OXANA PADURARU
MOLDOVA

First Secretary
**Republic of Moldova Embassy to the
United States of America**

https://www.linkedin.com/in/paduraru-oxana/

The current pandemic shifted many ways of working and thinking. For Oxana Paduraru, the question lied in how AI might affect international relations and diplomacy for communications or elections. Engage with her reflections:

THE CHALLENGE

The ongoing pandemic made a 360-degree change in our lives, it transformed our working style and our way of accepting hardships. It pushed us to think out of the box and shaped our current activities at an altered speed. I guess, there was enough time to reflect on what might come along these challenges, considering the new emerging technologies. Though, artificial Intelligence (AI) is a popular word these days, not many are prepared on start working on it.

As I embarked on the unique journey of AI Lab, I considered as well the genuine concerns of AI in my field of work, by wondering how, in time, AI could stimulate diplomatic systems, protocol and international relations. So, the topic I chose to focus on is – "AI in Diplomacy". I do believe that beyond a reasonable doubt, AI will impact at some point diplomacy, it will change the dynamics in the nature of the day by day activities, simply by reshaping it. We just have to be prepared. We have to start to understand the model patterns of AI, learn the ethics in AI, current trends, grasp the skills and reachable practices from other countries and write down the substantive needs for crafting and adopting an AI Strategy at national level.

With other colleagues from the Lab, we analysed wide range of other interesting topics such as: AI impacting strategic communication in public institutions, and AI in Elections. We really hope we can still work on these relevant thematic analysis.

THE AI SOLUTION

In my transformative experience in AI Lab, while reading, listening podcasts on AI and learning from Lab participants, I was reflecting on the unexpected circumstances created by the pandemic of 2020, which substantially impacted digital transitioning but as well diplomatic professional activities, being it bilateral relations, protocol or public diplomacy. This year, we were basically awaken by the needs to adapt to progressive technologies. I assume the most realistic scenario for many countries now is to start working on AI, by bringing together like-minded people from academia, government and business, aiming at understanding the AI evolutionary stages, issues, opportunities, problems and challenges.

I am convinced that the "AI in Diplomacy" may be addressed under the SDG 17 – Partnerships for the Goals. Through partnerships, continuous learning, clear strategies and visions on AI we can advance on this path. Only by building up a good legal framework we will be able to answer such questions as "How and if intelligent machines are capable to replace one day human intelligence, and in which sectors intelligent machines could replace the work humans do?"; „Will we send robots for negotiations or we will use robots for consular issues? What will be the AI impact on the international relations?". For these questions I am still looking for answers by learning from the existent practices in other countries.

FURTHER REQUIREMENTS

My number one lesson learned from past months is to keep learning and keep up with the latest developments and innovations in AI, as to better integrate it in our organizations and our societies. As in the new year 2021, the AI will be more deployed in medicine, education, biology, I trust that we have to work on building up intelligent systems that will empower us, humans, and prepare us to better understand and manage AI. I intend to continue my work on this topic in order to bring up some concrete takeaways and recommendations.

AI MARKETPLACE FOR DIGITAL FEMALE FREELANCERS

IFFAT ROSE GILL
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When founding Digital Starling, Iffat Rose Gill drew on her experience as the founder of The Code to Change, a nonprofit organization that aims to close the digital divide by empowering women with digital skills. Since launching the organization in 2010, she has trained over 500 women to be tech-job ready, and in the process impacted the lives of over 3,000 women. For her efforts in the field, in 2020 she has been nominated for the UNESCO Prize for girls' and women's education.

Now, she is launching her newest AI-powered venture, Digital Starling, read more about her vision

THE CHALLENGE

1. It is hard for newcomer female freelancers to break into the global freelance market.
2. Existing freelance platforms sometimes actually charge freelancers to access online jobs.
3. Female freelancers are chronically underpaid and un-der-valued.
4. At the same time, due to COVID-19 related lockdowns, many talented female professionals have/are losing their jobs every day. The economic crisis is hitting women the hardest.
5. Startups and businesses, especially the female run ones are taking a hit and it is hard for them to find affordable tech talent.

As businesses globalize and scale, more emphasis is being placed on conducting business online, leveraging the best enterprise software, digitally transforming your organizations, and reaching your customers through digital channels. However, as much as technology has brought us together in many ways, it has not closed the digital divide between genders. This is a significant factor in keeping women out of the workforce. In 2016, when the UN put the economic inclusion of women on the agenda, the gender

A MARKETPLACE FOR DIGITAL FEMALE FREELANCE
TALENT THAT YOU HAVE BEEN SEARCHING FOR!

gap in the workforce was 26% for G20 countries — and much higher in lower-income nations.

More in this article: https://medium.com/@womeninai_nl/the-story-of-digital-starling-c738ba23b486

THE AI SOLUTION

Digital Starling is a for-profit, for-purpose startup that brings together female-led founder teams with specialised digital assistants from under-represented communities. It came about as a way to bridge the digital gender gap, which remains wide. Indeed, Digital literacy is a prerequisite to almost every job in today's world.

Click here to see *Digital Starling's 1-minute pitch*

Digital Starling is tackling a two-sided problem: female talent is chronically underrepresented on a global scale, and many early-stage businesses cannot afford the talent that they need to scale. Iffat has created a pipeline of skilled professional women in Pakistan who need high quality jobs, and are limited in finding them locally or as a newcomer to the freelance scene. Using an intelligent A.I.-powered algorithm, leveraging semantic extraction techniques, as well as other NLP approaches, Digital Star-ling matches female talent from the emerging markets with career opportunities from around the globe and in various

HOW DOES IT WORK?

Your business efficiency starts with **DIGITAL STARLING**

A PIPELINE OF SKILLED PROFESSIONAL WOMEN

in Pakistan who need high quality jobs, and are limited in finding them locally or as a newcomer to the freelance scene.

PAIRING WITH THE POWER OF AI & NLP

Using an intelligent A.I.-powered algorithm, leveraging semantic extraction techniques, as well as other NLP approaches, Digital Starling matches female talent from the emerging markets with career opportunities from around the globe and in various industries.

A PIPELINE OF STARTUPS WITH DIGITAL JOBS

from around the globe who need to accomplish digital tasks but they can't afford the services in their developed markets or can't find the right talent.

08

industries. The pairing creates opportunities for businesses to recruit expert talent, and for women in the developing countries to get access to high quality jobs — all the while fighting the digital gender divide.

Digital Starling has yet to officially launch in January 2021; however, the interest is demonstrable. She has received over 300 applications for 200 spots in the upcoming fall training, which will be open to all women in Pakistan who meet the selection requirements. The program has also already received job postings and requests from startup founders and well-established businesses worldwide. Iffat is working very closely with her dedicated WaiACCELERATE mentors, allowing her to scale her venture more rapidly than she has previously thought possible.

The prototype can be seen here: http://starling.digital

FURTHER REQUIREMENTS

Digital Starling is looking for strategic partners for reaching out female talent in different Asian and African countries. Through our partners, we are already connected to The EQUALS Global Partnership for Gender Equality in the Digital Age: https://www.equals.org and the Web Foundation: https://webfoundation.org/2019/04/meet-the-equals-digital-skills-fund-grantees

- Investors and strategic partners who believe in our mission and are committed to impact, global change and gender equality through digital skills and economic empowerment of women.

- Additionally, advisors and mentors who are knowledgeable about running international multi-country operations, strategic partnerships and finance management would be a great asset and highly appreciated.

THE FOCUS

ACCESS TO SKILLED FEMALE TALENT FROM THE EMERGING MARKETS

who provide in-depth expertise in the fields of web development, design, UX/UI, data science, machine learning engineering, programming, customer excellence, content and communications.

HIGH QUALITY END-TO-END DIGITAL SOLUTIONS AND SUPPORT

to help entrepreneurs on their digital transformation and go-to-market journey, as well as scaling their business across geographies.

GAME-CHANGING BUSINESS GROWTH STRATEGY

to source innovative, impactful and cost-effective solutions with the power of female freelancing communities.

AI SUPPORT FOR REGULATORY DECISION MAKING

MUHAMMAD ADEEL
PAKISTAN

Diplomat
Ministry of Foreign Affairs
https://www.linkedin.com/in/muhammad-adeel-75323050

Muhammad Adeel is a career Diplomat and a PhD Scholar working on Science Diplomacy especially in the area of genome editing. He has now come up with an idea of how to support regulatory decision making supported by AI, read more about it below.

THE CHALLENGE

Regulatory decision making at different levels of governance requires myriad input from stakeholders and specialized knowledge clusters. Due to the diversity of inputs involved and prevalence of confounding factors such as institutional drift, regulatory decision making is adversely affected and may end up with encumbrances such as outdated compliance requirements, information asymmetry and asynchronous approvals at state and sub-state levels. This also hinders ease of doing business and impacts innovation life cycle of emerging industries.

THE AI SOLUTION

The use of artificial intelligence based tools specifically for managing, improving and modulating regulatory compliance and policy procedures. Through machine learning and neural network based mapping, entities can map specific requirements, optimize based on interdisciplinary input and produce tailored interfaces which reduce processing delays, overcome information asymmetries and promote harmonization of standards.

Such a solution can be applied incrementally starting of with a textual analysis of the existing regulatory landscaping and identifying bottlenecks that can be addressed through AI adoption. Subsequently, amendments can be proposed for existing regulatory structure based on a best practice model generated through machine learning.

FURTHER REQUIREMENTS

• Policy data sets
• Regulatory Approval Decision Making Flowcharts
• Capacity Building for testing of prototype

HOSTING TEAM

THE GLOBAL LEADERSHIP ACADEMY

The Global Leadership Academy (GLAC) addresses global issues and works with its international partners to build impact ecosystems and provide reflective dialogue spaces fostering innovation and action. Based on new insights, leaders and change agents from the fields of policy-making, business, academia and civil society develop innovative approaches to challenges in their areas of influence. Commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), GLAC is a central component in GIZ's range of services.

www.we-do-change.org

INTERNATIONAL TRAINING CENTRE OF THE ILO

The International Training Centre (ITC/ILO) is an advanced technical and vocational training institution. Founded in 1964 by the International Labour Organization and the Government of Italy, the Centre's mission is to achieve decent work for all women and men. It aims to be a forum where development intersects with all forms of knowledge in the world of work, from tripartism to technology. As a multicultural hub for learning, the Centre welcomes everyone, regardless of gender, race, or class.

www.itcilo.org

TOM WAMBEKE
ITALY

International Training Centre of the ILO
Head, Learning Innovation Programme

In this function I advise and assist colleagues, outside customers and partners on learning and knowledge sharing methods and technology, with a focus on information and communication technology for e-learning, blended learning and workplace learning.

ALESSIA MESSUTI
ITALY

International Training Centre of the ILO
Learning Innovation

Alessia has a background in communication with a special focus on the use of new media for social inclusion and local development. Fascinated by the idea that distance education and the use of new technology increases access to learning and promotes life-long learning, she keeps exploring new pedagogical approaches for adult learning.

ELENA MONDINO
ITALY

International Training Centre of the ILO
Learning Innovation Programme

Elena Mondino owns a degree in foreign languages and a post-graduate course in "French and Italian Market Development". Her educational background together with several years spent abroad, allowed her to develop skills and abilities useful in a multicultural environment such as the International Training Centre of the ILO.

MAREIKE ZENKER
GERMANY

Global Leadership Academy, GIZ

Mareike has been setting up partnerships for global dialogue on various topics over the last years. She is convinced of the importance of social dimensions and collaboration in all development areas and transformative challenges. For her, that is closely linked to embracing diversity in dialogue and supporting individuals to use their spheres of influence for change. Connecting different people has always been a central aspect of her professional life. She has been actively involved in different global and regional networks.

RAMSES BERMUDEZ
GERMANY

Global Leadership Academy, GIZ

Ramses is a systems engineer, who decided to pursue a life in sustainable development. He has broad professional experience with international cooperation organizations in developing countries, supporting environmental management, and promoting clean energy alternatives.

He now supports the Global Leadership Academy with the development of digital solutions, recommending innovative tools for collaboration and online interaction.

KAI-HSIN HUNG
CANADA

PhD HEC Montréal, Canada

His focus is innovation and research into complex development challenges, including the future of workers in the digital age, technology and society, and climate change. He is pursuing his Ph.D. in Organizational Behaviour and Human Resources at HEC Montréal, Canada and is part of the Interuniversity Research Centre on Globalization and Work (CRIMT). In the past, he co-led the Future of Work Supporting Initiative at the ITC-ILO and worked at the International Development Research Centre and Global Affairs Canada.

learn4dev
JOINT COMPETENCE DEVELOPMENT

An initiative under the learn4Dev framework