



**Humans  
in the Loop**

# **IMPACT REPORT**

## **2021**

**How Humans in the Loop is impacting conflict affected communities by connecting them to employment and training**





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# Introduction

In 2017 our social enterprise Humans in the Loop was founded with the vision to support refugees, migrants, internally displaced persons and those living in conflict areas through upskilling and digital employment programs. Our main aim is to offer training and guidance on their way to becoming self-sufficient alongside digital microwork employment in the field of AI annotation.

Humans in the Loop is a hybrid social enterprise combining two structures – a for-profit company providing employment opportunities to beneficiaries, and a non-profit foundation offering training programs for upskilling and supporting people on their career development paths.

This is achieved by offering people from conflict-affected communities the opportunity for remote freelance work, aiming to promote self-reliance and to reduce dependence on humanitarian aid.

As positive change is the main engine of our entity, throughout each year we collect data, monitor, and evaluate our work in order to process, reflect and improve. With these impact reports, we are not only able to self-assess our work but to also show how we have progressed throughout the year, where we have managed to have the most positive influence through the use of impact-related metrics. In this Social Impact Report, we will summarize what we learned from our beneficiaries and our partners, communicate information about our experiences, and share the lessons we came to learn in 2021.



# Highlights of 2021

The year 2021 was quite successful despite all the difficulties and social restrictions faced by the Covid-19 pandemic.

- ▶ During this year we completed pilots in Afghanistan (Brightpoint), and Lebanon (Techfugees) and started a new partnership in Yemen (Tamdeen). We won an additional 100K EUR in funding from the Gulbenkian Foundation for a pilot in Portugal.



- ▶ We launched the Humans in the Loop Training Platform where we developed 2 full courses on Microfreelancing and Annotation which were piloted in Portugal. We were shortlisted for the final 100 from more than 100,000 registrations from 200 countries as part of the Entrepreneurship World Cup for 2021.

- ▶ We also participated in the Dubai World Expo, as part of the Expo Live pavilion called "The Good Place" and the World Majlis series. We also became a member of the ILO Global Initiative "Decent Jobs for Youth" and became one of the 20 finalist teams for the SEIF-Driving Impact Innovation Awards 2021.



- ▶ This year, our core team expanded from 4 people in 2020 to 10 by hiring our Training Coordinator Iva, our Annotation Trainer Ghazaleh, our medical annotation specialist Mohamed, our new CCO Simeon Yalda our Project Specialist, and our Community Manager Ahmed. We also launched our community group and started organizing regular events for everyone to get to know each other better in an informal setting.

# Employment

**Humans in the Loop's remote work policy made our model resilient during lockdown restrictions both in 2020 and in 2021.**

During last year, we were able to complete almost double the number of projects compared to 2020 – 91% of them were completed on time, which is again an improvement compared to the year before. The total annotator earnings were 410k € and the total number of clients served was 42 in industries such as autonomous vehicles, retail, smart manufacturing, and others.

Our annotators earn a minimum hourly wage that is above the local minimum wage. HITL's minimum payments are set at the equivalent of 3€ per hour – because payments are determined on a per-unit basis rather than hourly, this minimum wage is estimated using time tracking tools.



**197**

**Completed Projects**

**€646**

**Average Earning per Worker**

**42**

**Total Clients**

**€410K**

**Total Annotator Earnings**

# Work Opportunities

Throughout 2021, we saw a 57% increase in active annotators working for Humans in the Loop compared to 2020. All of the active beneficiaries either come from conflict-affected communities or are still residing in such areas. In Bulgaria and Turkey, most people have refugee status or a foreign residence permit. A number of our Sofia annotators received Bulgarian citizenship, whilst many are still waiting for the outcome of their asylum applications. In the case of Syria, Iraq, and Afghanistan, the beneficiaries predominantly include internally displaced people and people living in conflict areas.



In Bulgaria a total of 33 annotators were active in 2021. Our biggest partner organization – Roia Foundation – operating in both Syria and Turkey, contributed with 394 active annotators working throughout the year on HITL projects. Our new partner Techfugees in Lebanon went through a pilot phase with 20 people trained and assigned with a project that took place in the second quarter of the year.

In Iraq, where HITL assigned one project in 2021, we had 18 people who were trained and worked on annotation at our partner Workwell. In our new partner organization Brightpoint in Afghanistan, projects were assigned in three out of the four quarters of the year and 21 annotators worked on HITL projects.

# Ethical AI

As a key provider in the AI pipeline, we recognize our role in contributing to building AI systems in an ethical and responsible way. Through our work, we make sure that the data that we process is collected in a way which respects personal data and privacy, and that it is annotated in a way that is diverse, representative, and bias free.

As part of these efforts, we have adopted our Ethical AI Policy, which regulates how we choose our clients, how we perform data collection and annotation projects, how we document our work to ensure transparency, and how we train our workers and raise awareness about ethical AI and their place in it.



As part of the policy, we have developed an "Ethical AI" course which is mandatory for all core team members and annotators. In addition, we have adopted a "client impact score" metric, as well as a set of templates for dataset documentation which follow the latest industry standards.

Finally, we also published two white papers in 2021: "Avoiding bias in AI through better dataset collection" and "through better dataset annotation". These contain a lot of our learnings after having worked on multiple annotation and collection projects, as well as references to relevant research and articles. We are also proud to be collaborating with leading institutions like the "Partnership on AI" to pilot responsible sourcing practices for data annotation work.

# Female Employment

In order to meet the needs of refugee or migrant women, Humans in the Loop offers a number of different solutions and support. The aim is that at least 50% of all participants in our trainings, skills development and employment programmes are women.

HITL prioritizes supporting women to have access to a wider range of job opportunities. The concept of introducing women to remote digital work supports their empowerment, enabling them to contribute to household finances and allowing them to work from home in the long term.



We are working closely with our partners and in 2022 we aim to provide support in order to overcome any barriers that women face to accessing our work opportunities. Across all our locations combined, in 2021 36,42% of the workforce was female which is 18.58% lower than the previous year. Improving on this to achieve gender balance across all locations is a priority for us in 2022.



# Courses and Training Programs

Building new skills and improving digital competencies is a leading priority for us. In the last year, Humans in the Loop was able to continue with our successful HITL Stars training program. We were also able to launch new projects and training in Bulgaria and in our partner countries.

## **Project-specific annotation training:**

For every project that we secure from clients and implement, Humans in the Loop provides dedicated specific annotation training. We hold those training both in Bulgaria, as well as in our partner NGOs in all locations. Those project-specific training are specialized and practical, tailored to the type of project that the graduates will work on.

In 2021 we created a specific database to track all the training we conducted. From March 2021 until the end of the year, HITL conducted a total of 37 different project-specific trainings. 25 of these training were held in Bulgaria. One training per location was held with each of our partners in Iraq, Lebanon, and Yemen. In Afghanistan and Syria, we had 4 trainings per organization.



# Courses and Training Programs

## HITL Stars:

In 2021 we launched two HITL Stars courses. The first one took place from January to April and had 14 female participants. According to the survey conducted at the end of the program, the average satisfaction rate was 4 out of 5, and 100% of the students believe that the skills they have acquired will be useful for their future work.



The second HITL course started in September and was open to both men and women. The course started with in-person classes during its first month but continued online due to pandemic measures. The satisfaction rate was again 4 out of 5 and all survey participants highly agree that what they learned through the two modules of the course will be useful for their future professional development.

# Case Study: Farasat

**“Because I worked as an architect, I have computer skills and experience with Photoshop so in a short time I can do a good job”.**

**- Farasat Mohammadi**



Farasat Mohammadi came from Iran to Bulgaria three and a half years ago. She found out about Humans in the Loop through her husband who had already been living and working for a couple of years in Sofia.

Throughout the years, Farasat has taken four courses at Humans in the Loop including the HITL Stars course in the winter of 2021. For her the most useful aspect was studying English and working on her speaking and listening skills.

She has 13 years' experience as an architect and since she arrived in Bulgaria she has been able to continue working in her profession.

However, due to the Covid-19 pandemic she lost her job and had to search for other opportunities. For this reason, Farasat began to work on annotation projects for Humans in the Loop.

Even though Farasat likes working as an architect, she thinks that Bulgaria cannot offer her opportunities in the specific lines of architecture she is interested in. For now, she finds working for Humans in the Loop more suitable and satisfying, and she enjoys the fact that she can practice her English.

# Training Programs

## HITL Business Stars:

The HITL Business Stars program launched in September 2021 with the support of the Andan Foundation – it targets conflict-affected people who already have some knowledge of English and basic IT skills. It was directly aimed at budding entrepreneurs who already had a small business, who create handicrafts that they would like to sell or have an idea of something they would like to develop into a business. The course was predominantly focused on how to market your business, and included basic skills for starting and running a successful online business, creating a marketing strategy, branding, and a website.



This first-of-its-kind HITL course had 7 participants with various backgrounds and different skill sets. The satisfaction rate with the HITL Business Stars course was 4.3 out of 5. All survey participants report that they would like to take part in a further and more in-depth business related course. Everyone also agrees that the HITL Business Stars program has taught them skills that they will be able to use in their continuing business pathways.

# Training Programs

## HITL Teenagers program:

At the end of 2021, Humans in the Loop introduced an online course specifically created for conflict-affected teenagers, both refugees and asylum seekers in Bulgaria. We developed this idea with the help of Telerik Schools Academy, who agreed to allow our foundation to use their curriculum for free so that we can reach out to more people. During our launch event, covered by micro-funding won from the initiative Meet and Code, we were able to spread information about the course.



The first session took place in December 2021 and it is planned to continue throughout the first months of 2022 with a total of 17 participants. An experienced IT teacher dedicates 2 sessions a week on digital skills training on topics such as Modern technologies, robotics, artificial intelligence, and 3D printers; Digital security and fake news; IT career opportunities; Getting started in web design, and others.

# Case Study: Sara



**“Before the course I thought it would be so hard to make a webpage and that I would have to pay but with HITL everything was easy”.**

**- Sara Faizi**

Sara Faizi comes from Afghanistan and has studied and worked in the field of Business Administration. She has been part of Humans in the Loop for over four years now and has taken part in a number of our courses and worked on multiple annotation projects.

When she arrived in Bulgaria, Sara had the dream to open an Afghan food restaurant in Sofia. However, she and her children faced many difficulties after leaving their country. Her son got very sick and they had to stay for some time in Germany for his treatment. When they came back, Sara continued with her plan.

She saw the offer for the HITL Business Stars course and signed up with the idea that it would help her on her way to making her dreams of owning her own restaurant come true.

For her, one of the most useful things she learned during the course was how to create her own website. Throughout the sessions she was also able to design her own logo, the restaurant's menus, brochures and banners, and she learned how to improve her restaurant's Facebook and Instagram pages.

Even though Sara faced many difficulties she did not quit and managed to open her own restaurant called Khaala Sara Foods at the end of 2021.

# Pilots

## Afghanistan and Lebanon

In the beginning of 2021, we completed two annotation pilots with Brightpoint in Afghanistan and Techfugees in Lebanon.

Brightpoint helps communities, families, and individuals remove the causes and conditions of poverty. It is an entrepreneurial ecosystem builder with direct contribution towards a thriving ecosystem for entrepreneurs and small businesses in Afghanistan.

Techfugees support and help the deployment of responsible technology, products and services for and with displaced persons across the world since 2015.



The organization also holds discussions and research about ethics and technology in the humanitarian space through conferences, papers and working groups. This research aims to create open-source and open-data platforms to identify, list and curate tech-enabled solutions empowering displaced people across the world.

The pilots in both partner organizations included Image Annotation - Tagging, and involved 30 people per country. After the pilot, Brightpoint received its first project in January 2021 about Sport segmentation and conducted two more annotation projects by the end of the year. Techfugees received its first and only project for the year in July which was about Arabic text annotation.



# Pilots

## Portugal

At the end of 2020, Humans in the Loop won substantial funding from the Gulbenkian Foundation to develop a pilot in Portugal.

We collaborated with Inovinter, an organisation that promotes and carries out professional training and social intervention projects that contribute to economic and social development, valuing human resources in a transversal perspective to all sectors of activity. Our second partner in Portugal is Aga Khan Foundation, bringing together profit and non-profit agencies that work primarily to improve livelihoods and the quality of life of vulnerable populations, mainly in Asia and Africa, irrespective of their race, religion, ethnicity, or gender.



As a result of our research we created a new dedicated training platform for Humans in the Loop where we can host self-led learning modules as well as content for taught programs. We then developed two completely online training programs: a five-module Introduction to Micro Freelancing and a five module Introduction to Image Annotation.

In September 2021 and November 2021 a total of 32 refugees and migrants in Portugal participated in a month-long training programme, working their way through the online content facilitated by a full time trainer and cultural mediator. The reported satisfaction rate of the pilots was 4.4 out of 5 and all participants were interested in participating in a follow-up training in the future.



# Pilots

## Yemen

We were delighted to roll out an adapted version of the online Annotation training program to a new NGO partner, Tamdeen, in Yemen in December. Tamdeen Youth Foundation is a civil, non-governmental and non-profit foundation that seeks to support socio-economic interventions to create and secure adequate livelihood opportunities for members of society. It enables people to thrive, grow and participate in making immediate and long-term change, allowing everyone to live in peace and competence.

16

**Women  
Completed  
Training**

15

**Men  
Completed  
Training**

5

**Training  
Models**



The microlearning trainings include image collection, tags, bounding boxes, polygons, and semantic segmentation. We are looking forward to this group of motivated annotators joining our workforce in 2022.

# Case Study: Alafraa

**“The course helped me so much because now I can manage my time and I discovered my skills”.**

**- Alafraa Elsaddig Hassan Eltoum**



Alafraa Elsaddig Hassan Eltoum comes from Khartoum, Sudan and has been living for the last three years in Portugal with her family.

She found out about the Freelancing course that took place in Inovinter in late 2021 through her mom and they both signed up for it together with Alafraa’s two sisters. She shares that the course probably was most useful for her mother. Before attending it, her mom did not know how to use a mouse and now, she knows everything about the computer. However, Alafraa also found many benefits from her HITL learning experience.

She is interested in photography and has learned by herself how to use professional photo editing tools and programs.

In the future she would like to find a job connected to her passion, that is why the freelancing part of the course was very useful for her. She wants to try to find such a job online, after she finishes her intensive Portuguese language courses.

Alafraa also really enjoyed the annotation part of the course. She works on her photography everyday and enjoys editing images which she found very similar to the annotation process. She would like to take more similar courses in the future so that she can be better at her photography and editing work.

# Programs and Events

## Language And Culture Exchange Program:

In 2021 we created a Language and Culture exchange programme with the US Alumni Group from Tuk-Tam, a group of Bulgarians who have lived in the United States. Participants from Tuk-Tam and HITL were matched together to meet online or in person once per week for a period of four months to practice and improve their language skills.

We organized two separate groups in the year 2021 – one in Spring and one in Winter that will continue until the end of March 2022. The average satisfaction of the first partnership was 3.8 out of 5. According to the feedback received, one of the main reasons for this lower score was the inability to maintain their weekly meeting arrangements with their partners- which we aim to rectify with the next cohort.

## Community Events

In 2021 Humans in the Loop held 12 social events with our community in Sofia. Once per month we organize online competitions, short trips, celebrations and events so that our community of annotators, volunteers and staff could come together for an informal get-together. Last summer, we visited zoos and in the winter, we initiated English language classes through vocabulary games, had virtual coffee sessions and distributed prizes for the winners.



# Impact Assessment

As part of assessing the work that HITL has done over 2021, we wanted to hear directly from our people about their experience with the enterprise. So, we undertook a **Social Impact Assessment**.

## Methodology:

At the beginning of 2022, Humans in the Loop conducted 16 in-depth interviews with people who worked on HITL annotation projects in 2021 in Bulgaria, Afghanistan, Syria, and Lebanon. We randomly selected between 3 and 4 people from each organization who had worked on at least one project in 2021, and arranged online interviews.

The participants of the interviews included 10 females and 6 males, with an average age of 27.6. Most of the interviews were conducted in English; only 3 of them were in Arabic, with translation help provided by bilingual Humans in the Loop staff members.

The beneficiaries in each location have different backgrounds and come from different countries, which affects their current status and employability / working opportunities. A high number of the interviewees said that they had to leave their home country/city because it is directly affected by war. Seven out of all respondents currently have refugee status and live in Bulgaria, Lebanon or Pakistan, and an additional 3 people are internally displaced.



# Advantages

## An Attractive Opportunity And A First Job For Many

6/16

respondents had experience in similar fields of work and the annotation projects they worked on were aligned with their higher education and job interests.

43.7%

of respondents find the opportunity to work from home to be the biggest advantage.

9/16

respondents had no previous experience working from home.

## Annotators highlighted

- Their growing interest in continuing to improve their computer skills after the courses
- The possibilities to balance work life and studies due to remote work opportunities.
- Being able to work while spending more time with their families, being able to talk with people from different countries and being safe at home from both conflicts and the pandemic
- That they enjoyed the chance to work on projects aligned with their higher education or previous experience



# Advantages

## Fair pay

67.5%

of the interviewees said the payment they earned last year per project was compatible with the working hours.

For the participants in the survey who worked on one or two HITL projects during the year 2021, the wages that they received were most often additional necessary income supplementing another part-time job.

## Enjoyable And Inspiring Work

As mentioned before, 37.5% of the interviewees have already studied computer related higher-education degrees or are currently studying, however, for many of the other survey participants, this experience changed their work paths.

Three of the respondents learned new things about AI and believe that skills like the ones they learned during the annotation and segmentation trainings are not only important but necessary.

**“I never knew that jobs like this exist. It is interesting and now I have experience so it is a skill set I want to keep developing” .**



**- Male, 29, Syria.**



**“In the future annotation will be more and more needed. With the hospital project, it is very interesting to see that AI can take the place of nurses in the future, so it will help medicine”.**

**- Female, 21, Bulgaria.**

# Challenges Faced

Most annotators interviewed said that they did not face issues working on HITL projects. However, some issues were raised, which will guide us in improving our programs, including:

## Difficulty in finding jobs

43.7%

of the interviewees had found it challenging to find another job in the country they reside in.

The challenges of course depend on where the interviewees currently are, as those who live in conflict-affected countries face different obstacles to those who live in Bulgaria for example. Two of our respondents from Afghanistan reported that the main obstacle to finding work is being female. For all 4 respondents in Bulgaria the main barrier to finding better or more secure jobs is language deficit. Among the other mentioned hurdles are discrimination and currency inflation, mentioned by interviewees in Syria.

## Electricity and Internet difficulties

All the respondents from Lebanon and Afghanistan said that while working on their HITL annotation projects, they faced Internet connectivity and electricity difficulties due to power shortages and electricity regimes.

Despite these difficulties, everyone who faced those issues said that they were able to find solutions such as using 4G connections, going to friends' or family's houses, or using Wifi in coffee shops.

# Challenges Faced

## Client Demands

Five out of 16 respondents reported that the instructions for a project they were working on changed after they had already started annotating. This difficulty was faced in previous years and we have taken this feedback very seriously. We have developed a chain of communication between the annotator, supervisor, our operations team and the client to communicate instructions and expectations clearly in order to avoid such situations.



When such difficulties emerge, we have developed and implemented a policy that when clients change the scope of work, annotators will receive financial compensation for any additional work that is required as a result.



# Case Study: Rodaina



**“I want to study something related to labeling and analytics now. I find it more enjoyable than teaching English. I would like to study this at the Uni when the situation in Lebanon allows it”**

**- Rodaina Hassan.**

Rodaina Hassan is 26 and lives in Beqaa area, Lebanon. She graduated with a Bachelor’s degree in teaching English as a Foreign Language and for the last 2 years she has been teaching at a college in her area, as well as teaching English to refugees.

Rodaina found out about HITL annotation projects and trainings offered at Techfugees through a friend.

She decided to sign up because she likes working on a computer and thought that learning about AI would be interesting for her. She says the experience was exciting for her and she liked that it was online. In the summer of 2021, she worked on an Arabic text annotation project together

In the summer of 2021, she worked on an Arabic text annotation project together with a partner. They were marking the required information and then reviewing each other’s work for errors. Rodaina shares that the electricity in the country was the major challenge during this period but she says that together with her partner, they managed to find solutions.

Currently, Rodaina is taking a Coursera course on data analytics and she received a scholarship for this program. She also registered for Python trainings and is interested in computer programming.

She also added that she had the chance to meet new people during the HITL project and still keeps in contact with them.

# Environmental Policy

Climate change is one of the defining crises of our time and in many cases, people become displaced because of its consequences, including extreme weather events and resulting disasters, threatened livelihoods and exacerbation of existing tensions and conflicts. Additionally, many refugees, asylum seekers and displaced people are disproportionately affected by the impacts. Many of those displaced end up living in climate change 'hotspots' and are at risk of secondary displacement or unable to secure their most basic needs such as shelter, hygiene and nutrition.

As a social enterprise working with displaced persons, Humans in the Loop recognises that we bear a responsibility to consider the impacts of our actions and how they affect the environment, both directly, in terms of our operations and the actions and behaviors of our staff team, and Indirectly in terms of our purchasing decisions, the services we offer to our clients and the work that we take on.

Because of this, in 2021 we created an Environmental Policy through which we have committed to minimizing the impact of our operations on the environment and to integrating environmental considerations into all of our business practices.



# Fair Work And Health Insurance

## Fair Work Policy

In 2021 we developed our fair work policy and shared it on our website. It is based on extensive feedback from our workers, colleagues and partners as well as on best practices in the industry so that we are able to ensure dignified work conditions for all of our annotators. We are very grateful to Dr. Andreas Hackl from the University of Edinburgh for his insights and recommendations.

Within the policy we – and our partners – commit to ensuring fair work conditions for all of our annotators and take a firm anti-exploitation stance. The Fair Work Policy covers commitments on non-discrimination, transparent recruitment, clear communication and written agreements for all project, adequate training, and a minimum wage that is always above the local minimum wage.

## Health insurance

As part of the needs gap identified during the process of developing our Fair Work Policy, we also introduced an internal health insurance program for all of our annotators and their children under 18, which covers medical treatments that would not otherwise be covered by the national health insurance scheme in the countries our annotators live in.



# Conclusion

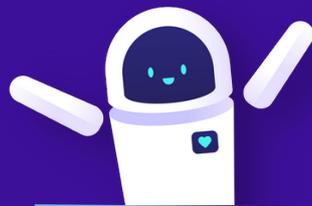
Each year we aim to evaluate, develop, and contribute to improving conflict affected people's lives by providing them with meaningful skills and earnings while at the same time contributing to responsible AI practices. The year 2021 allowed us to expand, creating new partnerships in Portugal, Yemen, Lebanon and Afghanistan. Over the coming year in 2022 we will set a priority to achieve more equal distribution of projects across all partners and countries. Furthermore, we will aim to improve gender equality amongst our annotators and to increase the monthly and quarterly earnings per annotator.

In 2021 we were able to see a number of our beneficiaries improving their skills and developing their career opportunities through the trainings and courses we provide. For the upcoming year we will prioritize the personal development of our trainees by giving them the opportunity to choose whether they want to work for our company or to focus on further training and career counseling.

Our community engagement and focus on inclusiveness has contributed to the development of our team spirit by hosting regular social events and bringing members of the community closer together. Our community events will continue to be a part of our agenda for 2022 with the focus on expanding their reach so that different teams and course participants, as well as their friends and families, can have the opportunity to expand their connections.



# Humans in the Loop



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