



# Humans in the Loop

The future of  
humans and AI

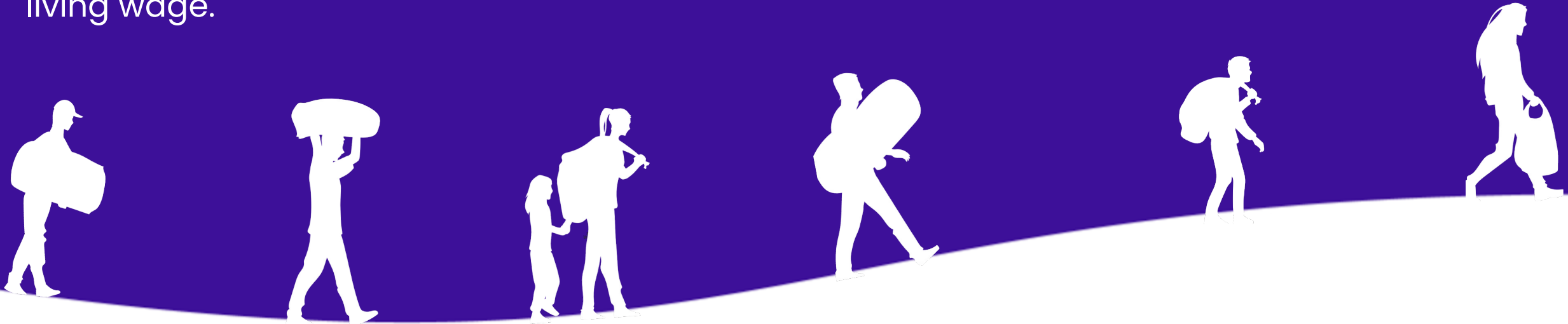
Zebra   
**DevCon 2023**  
Connect | Learn | Build

Tess Valbuena  
COO - HITL

# Over 110m people worldwide are forcibly displaced.

The World Bank estimates that around 1.8 billion people live in fragile/conflict affected environments.

By 2030, it is estimated that 2/3 of the world's extreme poor will live in fragile environments. In these circumstances, many are forced to take jobs that are unsafe, unstable or do not meet a living wage.



We see Humans in the Loop as a springboard to other remote work opportunities for our beneficiaries – our charitable foundation provides trainings on crucial skills to work in digital jobs such as IT skills, online freelancing, image annotation, and English language, thereby giving our beneficiaries the skills that they need to find online (or offline) work.

# AI needs humans to help it deal with the complexity of our world



**85 Million**

jobs will be replaced by machines with AI by the year 2025

**but 97 Million**

new jobs will be created thanks to AI



One of the jobs of the future created by AI will be a professional **human-in-the-loop**

# Introducing **Humans in the Loop**

We provide innovative online training and freelance work opportunities to displaced people, to help them secure their livelihoods through the global digital economy



## → **Remote work**

Digital work opportunities accessible from anywhere and to anyone



**Over 1K**

Workers employed



**49%**

Female workforce



**555**

People trained



**3-10 EUR**

Hourly payment



**1M EUR**

Distributed salaries



## → **Upskilling**

Trainings in English & digital skills to help workers improve their career prospects

# Services we provide



## Dataset collection

Don't have a training dataset yet? We can collect, generate and curate any type of data as close as possible to your use case and deliver a ready-to-use dataset



## Dataset annotation

Already have a dataset but it's not annotated? We can help by labeling your assets with bounding boxes, polygons, semantic segmentation and more

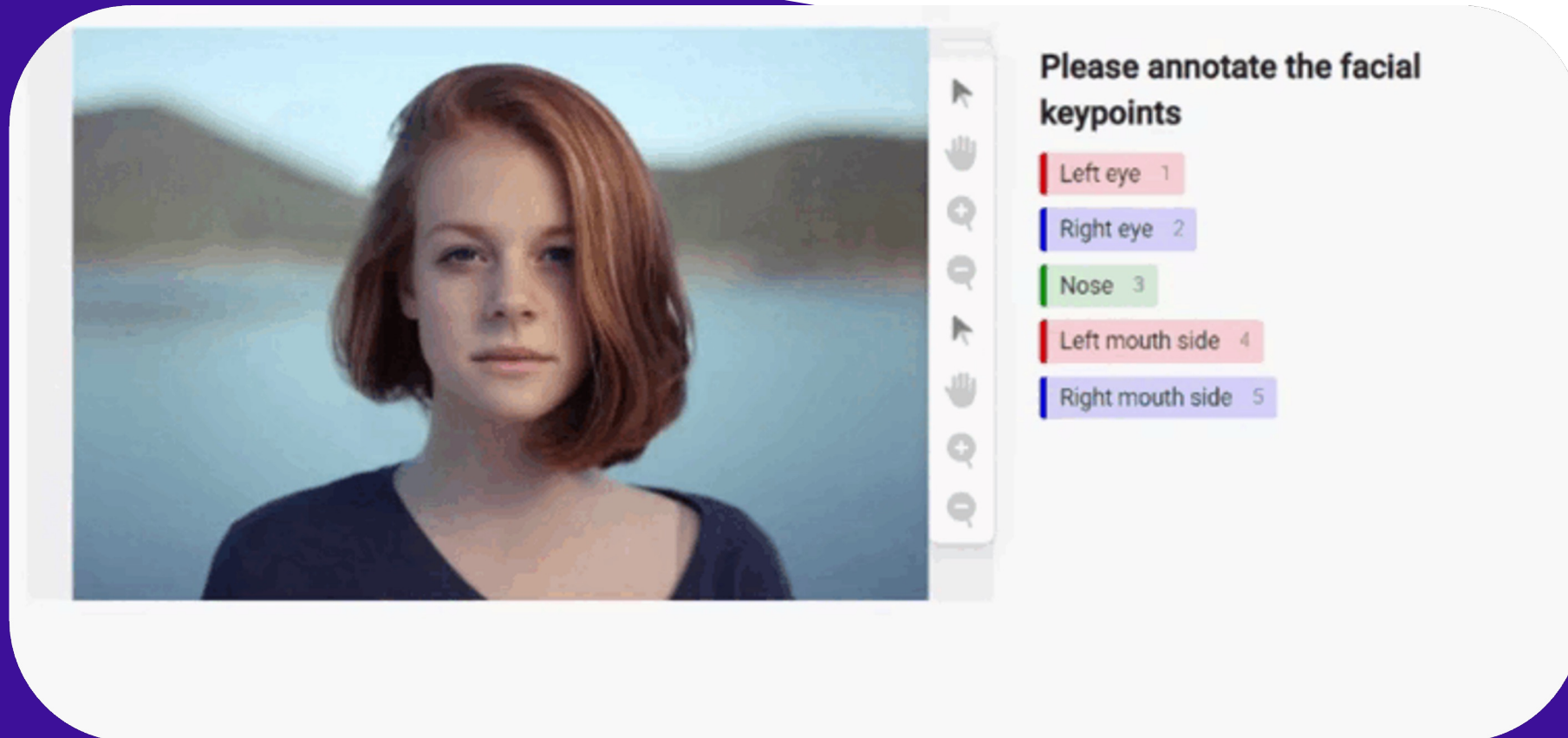


## Model validation

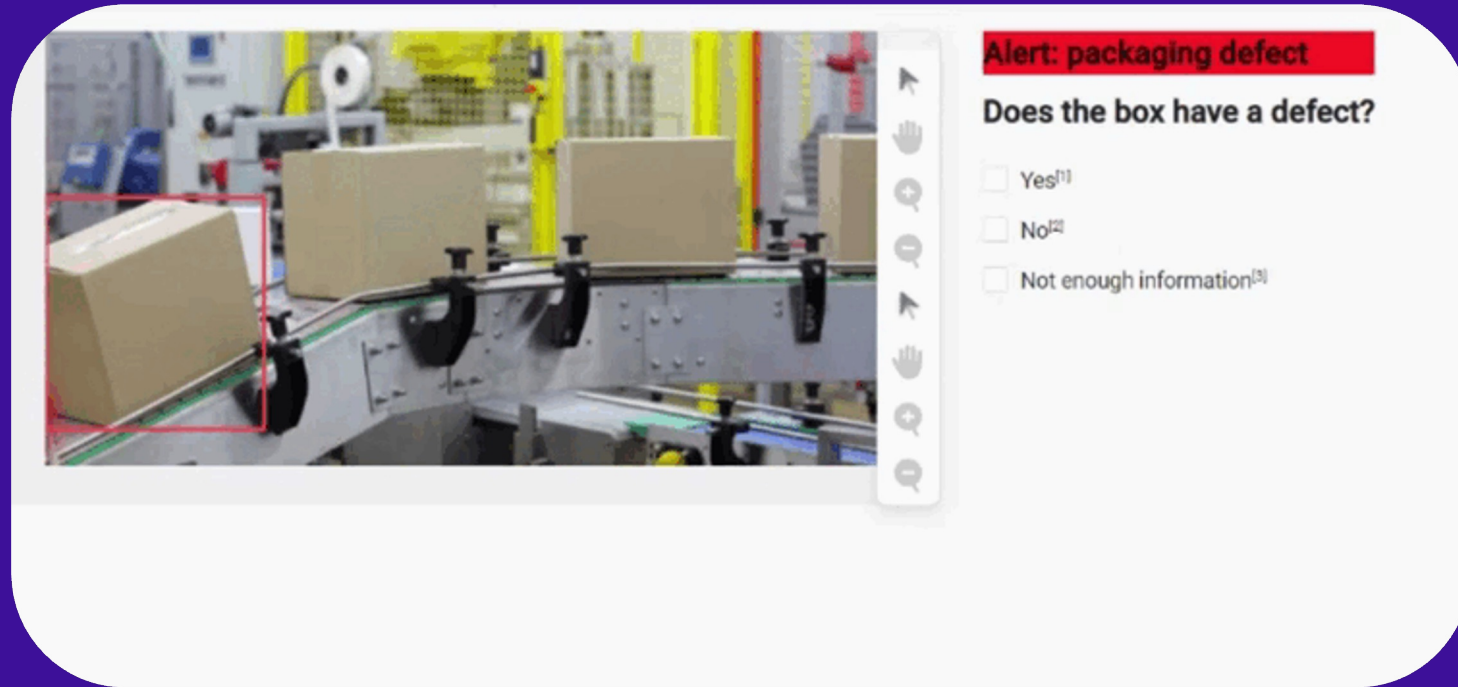
Have a model which is already trained? We can test the model on new data and correct wrong predictions as well as handle edge cases in real time where certainty is low

# The present: annotation of training data

Currently the demand is highest for gold standard human-annotated data which is used in traditional waterfall ML pipelines. But as more companies are adopting an MLOps process and infrastructure, the **need for humans in the AI lifecycle will become much bigger...**



# The future: human operators monitoring AI in deployment and handling alerts



Integration with the client's existing MLOps systems through webhooks or data streaming in real time

## ➔ Handling edge cases in high-risk systems

Operators address flagged or low-certainty cases in real time and can prevent harmful decisions of AI systems

## ➔ Providing actionable insights

Operators perform error analysis and provide qualitative data on failure modes to help mitigate data and concept drift

# Why now? Soon this will be legally required for all high-risk AI systems in the EU



High-risk AI systems (in education, recruitment, surveillance) will be required to have **human operators** who oversee their functioning

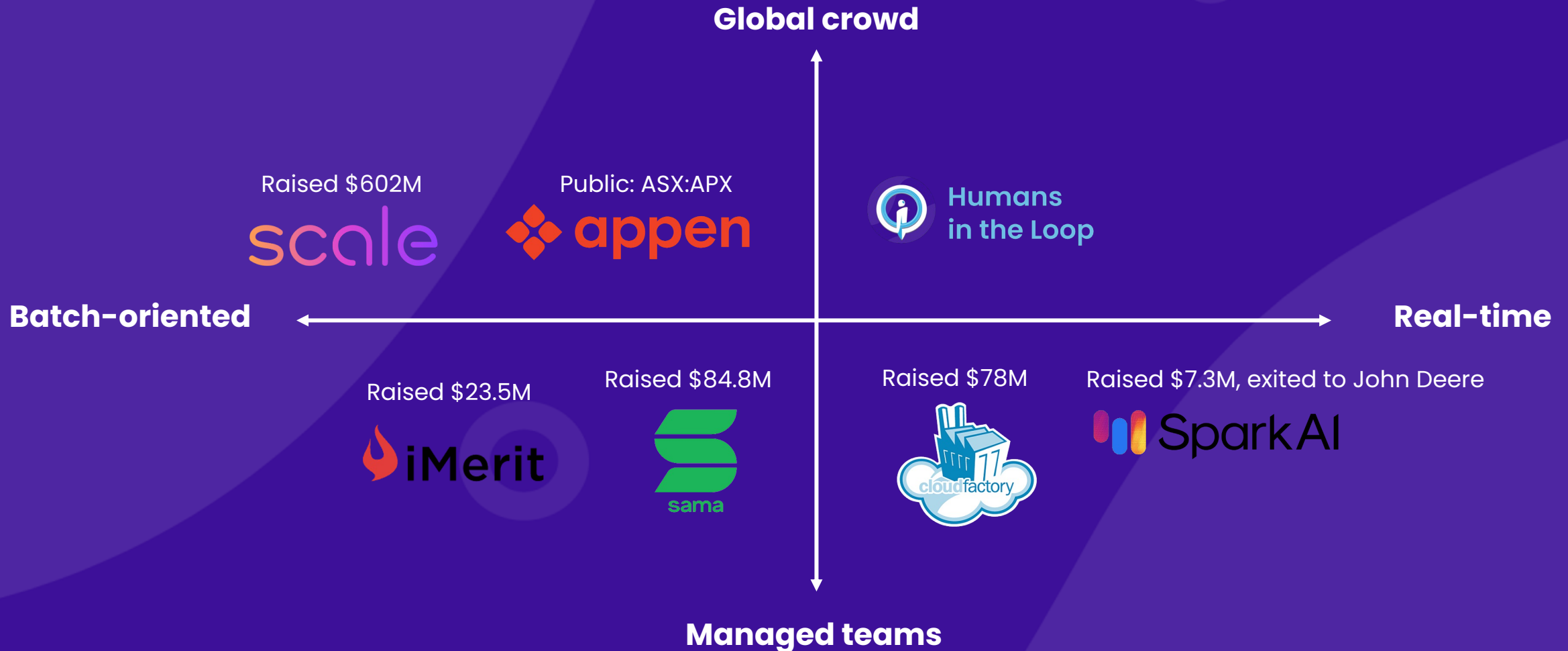
A screenshot of the MIT Technology Review website. The header includes the MIT Technology Review logo, navigation links for 'Featured', 'Topics', 'Newsletters', 'Events', and 'Podcasts', and buttons for 'Sign in' and 'Subscribe'. The main content area has a dark background with a grid of dots. The article title is 'A quick guide to the most important AI law you've never heard of' under the category 'TECH POLICY'. The sub-headline reads: 'The European Union is planning new legislation aimed at curbing the worst harms associated with artificial intelligence.' The author is 'By Melissa Heikkilä' and the date is 'May 13, 2022'.

- ➔ The EU AI Act will come into force starting in 2023, and will publish a registry of all high-risk AI systems in the EU (direct source of leads for us)
- ➔ Companies will be spending a lot on compliance: the implementation of the EU AI Act will cost **450k USD** per company per high-risk AI system ([source](#))



# Our advantage: real-time, 24/7, global

We focus on **real-time** human-in-the-loop with **24/7 availability** and **global teams** representative of many different locations, demographics, and cultures



# Specialized teams

For each client, we work with a dedicated team which receives project-specific training. This helps us ensure consistency in the interpretation of the data and a deep understanding of each client's dataset, taxonomy, and tools



## Medical

- Radiology
- Ultrasound
- Robotic Surgery
- Cardiology
- Gastroenterology



## Geospatial

- Drones
- Satellite imagery
- Infrared imagery
- SAR
- Natural disasters



## Automotive

- Self-driving cars
- Delivery robots
- Insurance
- Damage analysis
- Traffic monitoring



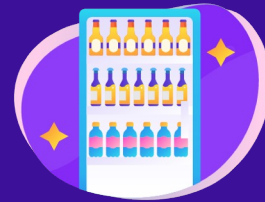
## Industrial

- Manufacturing
- Recycling
- Logistics
- Construction
- PPE detection



## Agriculture

- Precise farming
- Weed detection
- Plant counting
- Disease detection
- Soil analysis

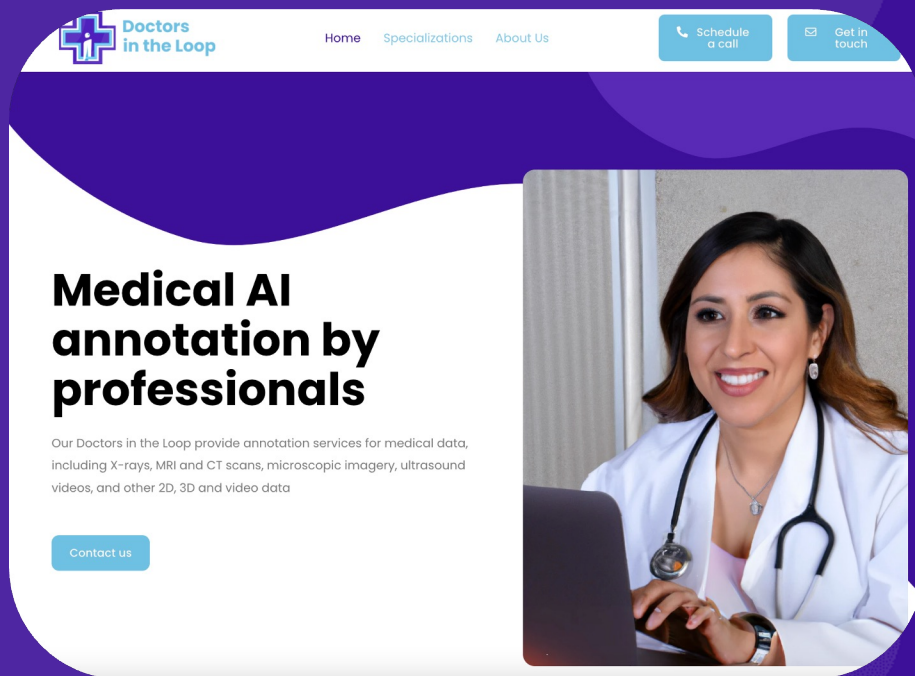


## Retail

- E-commerce
- Fashion
- Smart carts
- Shelf monitoring
- Buyer tracking

# Serving more than 100 AI companies

## A new brand for medical AI



## Our customers



# Expanding globally to impact 10k people by 2033



# How it works: the user journey



## Recruitment

Through an NGO partner

We partner with established non-profits in the countries where we operate in order to reach those who need most help



## PDP

Personal development plan

Beneficiaries are onboarded and are given a personal consultation to map their skills and needs and the milestones they need to achieve



## Training

Through our foundation

We provide trainings in annotation skills and freelancing, as well as English, computer literacy, IT skills, and access to 100+ online courses



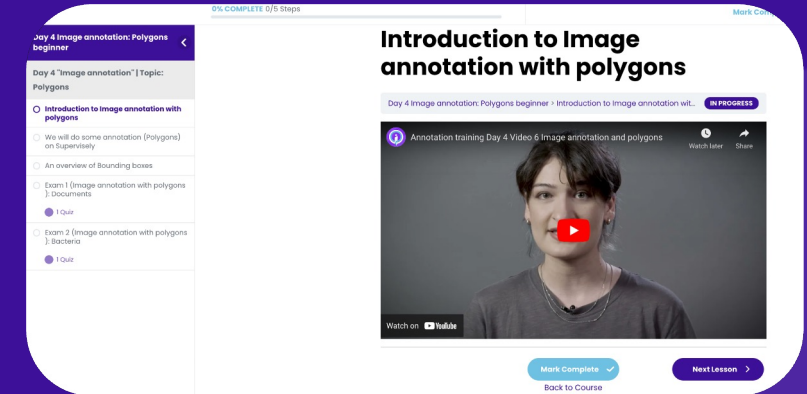
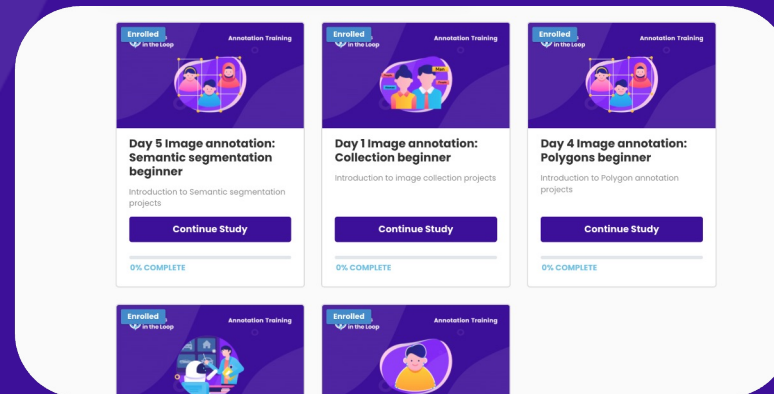
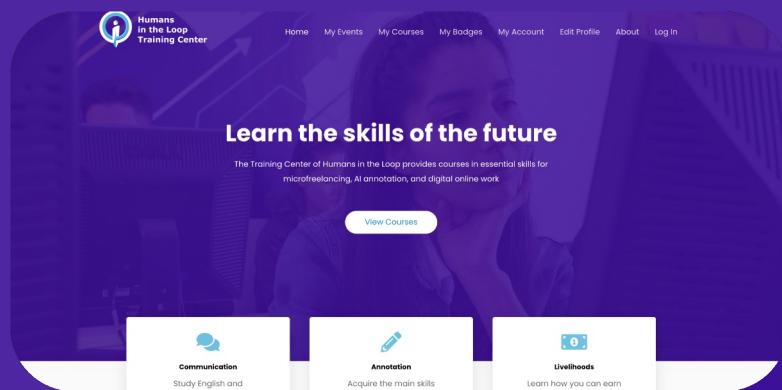
## Paid work

Through our company

Beneficiaries work as remote digital freelancers on easy projects for data annotation and real-time monitoring for AI systems

# Upskilling to enable professional growth

Through our proprietary training platform, we offer a variety of online trainings related to annotation skills, working online as a freelancer, ethical AI, and other topics. Through our partnership with GoSkills, we are able to give beneficiaries access to 100+ online courses in IT, Excel, and soft skills which will be relevant to their future professional development.



In addition, we regularly organize live instructor-led trainings, either in-person or online, including:

1. HITL Stars: English and computer skills
2. HITL Teenagers: Introduction to IT for teens
3. HITL Business Stars: IT skills for entrepreneurs



# Our Management Team



Iva  
**CEO**

European Young  
Leader, Forbes 30  
Under 30 social  
impact



Ivan  
**CTO**

6+ years of  
experience in Data  
science and  
Machine Learning



Tess  
**COO**

20+ years of  
Operations  
management in  
BPO sector



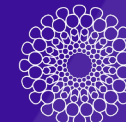
Gary  
**CCO**

10+ years in IT  
product sales and  
business  
development



Hester  
**CIO**

10+ years in  
education, career  
development, and  
vulnerable groups

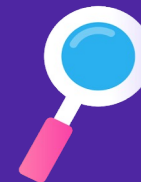
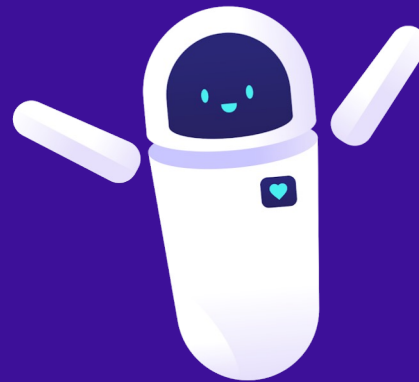




# Humans in the Loop

No matter the trend or  
technology. We keep AI human

## Questions and Insights







# Thank you

Get in touch:  
[tess@humansintheloop.org](mailto:tess@humansintheloop.org)  
[hello@humansintheloop.org](mailto:hello@humansintheloop.org)