# AI Observation Platform Report

December 2023 - GPAI New Delhi Summit

GPAI | THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

*This report was developed by Experts and Specialists involved in the Global Partnership on Artificial Intelligence's project on the Observation Platform of AI at the Workplace. The report reflects the personal opinions of the GPAI Experts and Specialists involved and does not necessarily reflect the views of the Experts' organisations, GPAI, or GPAI Members. GPAI is a separate entity from the OECD and accordingly, the opinions expressed and arguments employed therein do not reflect the views of the OECD or its Members.*


## Acknowledgements

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# Executive Summary

The Observation Platform of AI at the workplace project was born in 2021.

To understand the motivations behind this project, we can quote the first 2 sentences of this project's report in this year 2021:

“To build a better future for workers collaborating with AI, to be more inclusive on various criteria such as disability, gender, ethnicity... a mandatory initial step is observation. The aim is to capture what is happening in the real context of workplaces: observe AI at the workplace, gather as diverse as possible use cases, conduct qualitative analyses of its impact in different situations, geographies, sectors, users.”

And indeed, since then, three generations of students have been hired (in Europe/Canada, Japan and Mexico) and two reports have been published on the impacts that could be observed of AI on the worker's environment.

This project has shown both:

- a quality of continuity, by repeating the same questionnaire year after year and engaging students,
- but also, a capacity for adaptation, as we have seen 3 ways of conducting these student communities, with an innovative vision in the last community in Mexico, which adapted to a worker profile disruptive of that previously observed, the gig worker.

This year we can put in perspective 3 studies:

- The one from the Japan Students’ Community, led by the FoW Experts Arisa Ema and Yuko Harayama, who have already contributed to GPAI’s work in 2022, and will continue in 2024.
- From LaborIA, to which belongs Yann Ferguson, FoW Expert FoW but also scientific director of LaborIA.
- The one from the Mexico Student’s Community, led by the FoW Expert Saiph Savage. This Generation notably distinguished itself through its dedicated focus on gig workers. With a strategic and intentional approach, they honed in on this segment of the workforce for their research, actively seeking gig workers as interviewees to understand their unique challenges and needs. Through a synergistic partnership with the National Autonomous University of Mexico (UNAM), they went beyond mere observation and took a bold step forward in creating innovative generative AI tools specifically designed to support Latin American gig workers. These novel AI solutions were not only tailored to enhance job discovery and match-making for gig workers but also to foster a more dynamic and equitable employment landscape in the gig economy. This proactive initiative underscores the community’s commitment to leveraging AI for social impact, directly contributing to the economic empowerment of a critical and burgeoning workforce sector in Latin America.

Given the different targets of the workers interviewed in Japan, France and Latin America, the rest of the report will be divided into 2 main parts:

- The first on more traditional workers, who are in relatively stable employment. The questionnaire used since the start of the project in 2021 is perfectly suited here, since

it involves analysing the before, during and after implementation of the AI application in their workplace.

- The second part focuses more on non-traditional workers, who have one very short assignment after another and therefore experience a less stable working environment. These are commonly referred to as GIG Economy workers.

Of course, it is not intended to generalise the profiles studied here to the geographies where the interviews took place. If the profiles of gig workers are presented by the Students' Community in Mexico, it is mainly because they have targeted these workers.

# I/ Traditional Workforce – Japan Students' Community

## 1/ GPAI Japan team activities

In Japan, the "Future of Work" program has been conducted since 2021. In 2022, the second year of participation, in addition to the University of Tokyo and Doshisha University, the scope of activities will expand to include Tohoku University and Toyo University, as well as Hong Kong University of Science and Technology. These participating universities are taking the lead in collecting AI application case studies in Japan and submitting them as materials for international discussions at the GPAI.

A total of 45 students from four universities (Doshisha University, Tohoku University, Toyo University, and Hong Kong University of Science and Technology) participated in the Japan team for the "Future of Work" 2022 survey, with support from their respective faculty advisors. Two GPAI "Future of Work" committee members and a steering team from the University of Tokyo's Institute for Future Initiatives were responsible for overall supervision and coordination with the GPAI.

Each survey team selected survey sites based on their respective research subjects, and the participants took the initiative to carry out the work from the interview survey approach for implementation and reporting. Regular joint meetings were held between the management and survey teams to confirm progress and coordinate common issues.

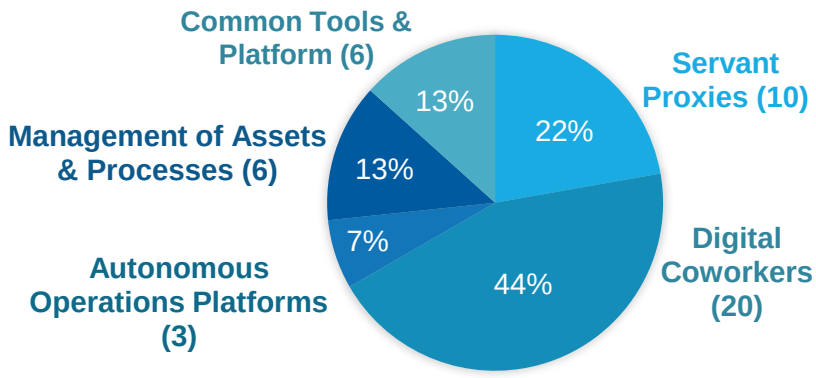
The survey was conducted from August 2022 to January 2023.

## 2/ Summary of Survey Results

The 2022 survey examined 45 AI applications in 18 industrial sectors, including energy, environment, agriculture, food, construction, automotive, logistics, hospitality, medicine, nursing care, finance, education, advertising, government, telecommunications, web services, IT, and auditing.

When these use cases are divided by the analysis axes set by the GPAI: "human replacement," "digital co-workers (in conjunction with workers)," "autonomous services", "simulation visualization," and "standard development tools/platforms" the majority of the cases fall into the "human replacement" and "digital co-workers (in conjunction with workers)" categories. Conversely, in the Chinese cases surveyed by the Hong Kong University of Science and Technology, some cases in the infrastructure sector fell under "autonomous services".

FIGURE 1: PERCENTAGE OF EACH CATEGORY OF CASES STUDIED



## 3/ Case Studies and Discussion

Although there were common questions regarding the GPAI survey, the academic backgrounds and grades of the participating students, as well as the purpose of their participation in the survey varied for each team. For more comprehensive information, see the report provided by the Japanese research team. In this report, we will present a selection of case studies.

### Case1: Care

| | |
|---|---|
| Industry/Type of work | Care |
| Eligible departments and services | Business support AI (care plan creation support AI) |
| Interviewee Sector | The end users of the AI system (not in use at the time of the interview) |
| Purpose of AI implementation | Improvement and optimization of service quality |
| Functions of AI systems and products | When a user's information is entered, the AI, which has learned from actual past care plans that showed improvement in the user's conditions, proposes services tailored to the user and displays predictions of the user's conditions after using the services. |
| Main Users | Care manager (nursing care profession) |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | - Input items to the AI are the same as usual, but the number of inputs increases when working side-by-side with existing systems.<br>- Sometimes services do not take into account local circumstances when proposed, which makes the services unavailable.<br>- AI is an entity that can "answer" and "confirm" users' perspectives and ideas.<br>- There was an opportunity for FB to the developer (a simple form of feedback on the use and after-use of the product). |
| Other impressive features and challenges perceived | - AI in 2019 was unable to reflect the thought process of care managers who consider the condition and wishes of each individual user, and as a result, it could not propose services that matched the user's needs.<br>- The intentions of the developers of this system interviewed in the 2021 survey were not conveyed to the users in the field, and it seemed that there was not enough communication. |

## Case 2: Service Industry

| | |
|---|---|
| Industry/Type of work | Service Industry, Entertainment |
| Eligible departments and services | AI Dialogue Service |
| Interviewee Sector | Responsible for AI system research, development, implementation, and solution provision |
| Purpose of AI implementation | - Conversation with AI<br>- Reduction of manpower burden by AI |
| Functions of AI systems and products | Conversation, chat, facial recognition |
| Main Users | All general users |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | - AI guidelines are shared within the company.<br>- The development of the product was conducted with full consideration of personal information from the design stage. |
| Other impressive features and challenges perceived | - Possibility of technological collaboration across different industries and sectors<br>- A vision of blurring the lines between work and entertainment concerning the application of AI technology.<br>- I felt that AI can develop into an entity that can give humans new ideas and perspectives, rather than simply replacing human labor. |

## Case 3: Education

| | |
|---|---|
| Industry/Type of work | Education |
| Eligible departments and services | Middle school education |
| Interviewee Sector | Junior High School Teacher (Mathematics) |
| Purpose of AI implementation | Curriculum reorganization and changes in standard hours of study guidelines through demonstrating the effectiveness of AI teaching materials in the demonstration project |
| Functions of AI systems and products | Exercise application (for 5 subjects)<br>AI analyzes the causes of wrong answers, and questions are individually optimized. |
| Main Users | Junior high school student |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | The change from the old style of teaching, which mainly involved writing on the board, to a teaching style centered on self-study using assignment printouts and AI materials has increased satisfaction, as it has allowed us to devote more time to what we think is important as teachers, such as teaching skills to control concentration. |
| Other impressive features and challenges perceived | - In the future, what will be required of teachers will change from "a bushy attitude that can guide people's lives" and "giving interesting lessons" to "communicating how to learn and the significance of learning.<br>- As AI technology increases the range of responses, such as translation apps, children's personalities will grow in various directions.<br>- Based on the above two points, diversity will be required of the faculty in the future. |

## Case 4: Auditor

| | |
|---|---|
| Industry/Type of work | Auditor |
| Eligible departments and services | AI/Innovation department, audit services |
| Interviewee sector | AI Development and operations division |
| Purpose of AI implementation | - Improve the efficiency of audit operations<br>- Scale-up and sophistication of audit services (expansion of people skills/responsiveness) |
| Functions of AI systems and products | - Fraud detection<br>- Analysis using journal level and financial statements<br>- Automatic disclosure check<br>- Visualization of workflow |
| Main users | Internal (audit team) |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | - AI is making audits more sophisticated and efficient by analyzing and verifying data in audits.<br>- AI systems are used mainly as a supplementary tool with machine learning as the main tool, so questions on ethics/bias/impartiality, etc., were not applicable. |
| Other impressive features and challenges perceived | AI systems are only a supplementary tool for human operations (the main purpose is to improve operational efficiency), and humans will ultimately check the output of AI and make judgments and decisions. |

## Case 5: Renewable energy industry

| | |
|---|---|
| Industry/Type of work | Renewable energy industry |
| Eligible departments and services | Intelligent inspection platform for solar panel and offshore wind power generation facilities |
| Interviewee Sector | AI system developer (CEO) |
| Purpose of AI implementation | - To automate and streamline equipment inspections at power generation facilities<br>- To ensure manpower and safety at work sites |
| Functions of AI systems and products | - Data collection and modeling of wind turbines<br>- Planning the route of the drone inspection<br>- Vibration sensor monitoring and diagnostics |
| Main Users | Staff involved in the maintenance of the solar and wind power generation facilities |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | - The complexity of operations in the energy industry and the many regulations governing it make it important to equip people with robust knowledge and experience in the industry.<br>- The integration of their domain expertise with AI technologies is crucial to successfully match the needs of the field with the capabilities that AI can provide. |
| Other impressive features and challenges perceived | - In developing the AI-based technology, the company collaborates with universities and public research institutions and uses open source to update the algorithm.<br>- Although a regulation has been introduced in China that require disclosure of algorithms, it is more important to ensure adequate data for training and optimization than complying with the requirement of the regulation. |

## 4/ Feedback from participating students

Students who participated in the survey were asked to complete the questionnaire. The main feedback obtained from the students was as follows:

### What I enjoyed and learned from participating in GPAI activities

Through this survey experience of directly interviewing companies and listening to their views on the front, many participants commented that they were able to "gain knowledge and insights that are difficult to access in daily research," and "hear actual AI perspectives from major Japanese companies". Many participants commented that it was valuable to gain information and experience that cannot be obtained in regular classes, such as "It was good to know the latest AI situation".

In addition, based on experiences with people in various positions involved in AI technology and services, the following comments were made: "It was good to hear the actual voices of people from companies promoting the development of AI technology and what they are doing and thinking about AI technology for people who do not know about AI technology". "It was good that I could understand both positive and negative views of AI, including their rationale, as my knowledge of AI increased". The participants also mentioned that they were able to gain a broader and more multifaceted perspective on the field of AI application, such as "I was able to gain a deeper understanding of the benefits and risks of AI through real voices from the field".

As a more specific insight, one participant commented, "As the shift to AI and DX progresses, I learned that it is very important to minimize the gap between the people who work there, the on-site situation, and the image assumed by the development side".

Others commented that they gained valuable social experience by independently conducting survey requests and coordination and liaison work with companies, even though it was difficult.

### Difficulties with interview methods and items that could be improved

Some respondents commented on the actual interview process, saying that the amount of information available for preliminary research was not very large and that it was difficult to deepen their understanding of the target service before the interview. There was also a comment that it was difficult for interviewees to understand what they wanted to investigate according to the common questions of the GPAI.

One respondent commented, "There were many situations where there were companies I wanted to interview, but in reality, it was difficult to contact or request them without a personal network." Related to this point, another respondent felt that more interactions and activities related to the GPAI in the target region are required to spread the word.

### Expectations or suggestions for future GPAI or student community activities

Regarding the future activities of the student community at the GPAI, many commented that they looked forward to more opportunities to interact with students from other universities and countries. One student-exchange meeting within the Japanese team was held online this year, but there were comments that more opportunities, including offline meetings, would be good for creating a sense of unity.

Regarding the specialties of the participating students, one commented that the activity would be even more meaningful if teams from other academic disciplines such as law and policy participated.

Some commented that they would like to continue their involvement in the future, such as their interest in connecting to and managing the program in a way that allows the entire student body to interact.

# II/ Traditional Workforce – Insights from LaborIA

In response to one of the recommendations of the Villani Report (2018) and in addition to France's involvement in GPAI, the Ministry of Labor, Employment, and Inclusion and Inria jointly founded LaborIA in 2021. LaborIA is a laboratory aiming to build and reinforce a practical vision to better understand artificial intelligence and its effects on work, the workforce, employment, skills, and social dialogue.

The creation of this laboratory responds to the need to understand, analyze, and experiment with the impacts of technologies using artificial intelligence on work, skills, employment, and vocational training. The laboratory aims to evolve organizational practices and establish recommendations prior to the implementation of appropriate public policies. LaborIA has been built around various operational objectives:

1. Shedding light on the public debate regarding the impacts of AI diffusion in organizations.
2. Producing recommendations to promote the development of responsible, inclusive AI that serves humans and creates value in work environments.
3. Contributing to the production of educational tools for key stakeholders involved in the future of work, such as social partners, professional branches, decision-makers in private and public organizations, etc.
4. Participating in thematic publications aimed at the general public to raise awareness about the transformations of work and employment induced by AI and to provide support.
5. Assisting the decision-making process of the Ministry of Labor, Employment, and Inclusion in its activities related to vocational training.

In 2022, LaborIA launched a questionnaire survey. The questionnaire survey provides a representative overview of AI usage in the workplace. It sets the context and research hypotheses, which will be confirmed by other research phases (longitudinal study and field study). The questionnaire survey involves 250 multi-party interviews (top management, human resources, information systems, innovation departments), exploring the usage and perceptions of AI among decision-makers in French companies with more than 50 employees. Based on a representative panel of French companies, it highlights the most commonly used AI systems, the motives behind their implementation, and the barriers and obstacles that projects had to overcome. The study also examines the perceived or projected impacts of AI systems on various dimensions of work.

In 2023, LaborIA initiated qualitative studies through interviews. The central approach of the research is to observe the usage of artificial intelligence systems by workers. The methodological uniqueness of this approach lies in observing the usage in real conditions, as close as possible to the users of the AI systems. Cross-referenced with interviews conducted with employees (operational staff, decision-makers, team managers, etc.), as well as with solution providers (internal or external), these observations highlight the issues related to mechanisms of appropriation and the impacts experienced by users of these solutions.

In addition to the questionnaire survey, the longitudinal study investigates 10 decision-makers in organizations and project leaders implementing an AI system at different stages of the project, to observe the system's adoption process. This approach reveals the factors that foster or hinder the deployment of AI and assesses the evolution of impacts and their perception within the same work environment. The method's interest lies in tracking the indicators over the long term. Each decision-maker will be interviewed three times over a period of 9 months. In 2022, LaborIA and GPAI established a project partnership to collaborate and pool their efforts.

# 1/ Cases studied by LaborIA

## Case 1: Building

| | |
|---|---|
| Industry/Type of work | Building |
| Eligible departments and services | Production |
| Interviewee sector | AI system developer and end-user. |
| Purpose of AI implementation | Smooth out production activity to avoid over- and under-capacity and excessive recourse to subcontracting. |
| Functions of AI systems and products | - Calculate manpower and machine capacities to anticipate the workshop's suitability for future workloads (absence planning to determine production capacity, general planning to decide which sites to subcontract, production planning to adjust the sequence of production workstations, etc.);<br>- Facilitate access to relevant key information for each new job or additional work;<br>- Easily integrate new production targets;<br>- Estimate production times for each workstation based on available information. |
| Main users | Head of production |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | In its first version, the production manager suffered from a rationality conflict between the AIS output and his experience. He found the system very prescriptive and disrespectful of his expertise. The AIS stigmatized the discrepancies between what was predicted and what was actually achieved. A return to design led to greater acceptance of the AIS, which was repositioned as a decision support system. The main lesson is to avoid creating rationality conflicts between the AIS and the worker. |
| Other impressive features and challenges perceived | When rationality conflicts are eliminated, the user adopts IAS opportunities more readily. In this case, the user has recognized the added value of long-term prediction. |

## Case 2: Public service

| | |
|---|---|
| Industry/Type of work | Public service |
| Eligible departments and services | Human resources(payroll managers) |
| Interviewee sector | Experts |
| Purpose of AI implementation | The goal is for payroll managers to be able to focus on their core tasks, both in terms of payroll and personnel administration. |
| Functions of AI systems and products | Chatbot to automate first-level inquiries - for which the use of the institution's intranet is insufficient - from all employees : leave and time off management, internal regulations, help desk, training, etc.)<br>Currently, approximately 5,000 questions are addressed to the chatbot annually. Its operation is based on Natural Language Processing (NLP) - the system recognizes predefined words which it associates with categories, allowing it to select the relevant response and send it back to the user. |
| Main users | Employees |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | - Users express doubts about the answers provided by the chatbot and want access to official sources.<br>- Experts are concerned that employees may use the chatbot to challenge the answers.<br>- Additionally, the involvement of experts in updating the chatbot is not recognized. |
| Other impressive features and challenges perceived | The weak commitment from the management in the project hinders its adoption.<br>Employees believe that it is the role of HR to assist them and do not understand why a chatbot is needed to alleviate this task |

## Case 3: Public service

| | |
|---|---|
| Industry/Type of work | Public service |
| Eligible departments and services | Business advisor |
| Interviewee sector | End-users |
| Purpose of AI implementation | Detecting illegalities and discrimination present in job offers entered by recruiters. |
| Functions of AI systems and products | - The AIS is based on labeled foundations consisting of tens of thousands of sentences selected experts (through the PE Replay labeling tool).<br>- Business counselors have been involved in the development and enrichment of the knowledge base through "labeling workshops", which allowed for the formalization of 23 "legality themes" and the determination of the legitimacy and relevance of alerts sent to counselors regarding illegality.<br>- This involved the counselors providing feedback on the selected sentences for legal input, iterative work on interpretation subjects and problematic cases, modification of certain guidelines, and adaptation of the model with data scientists. |
| Main users | Advisors |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | This case demonstrates the issues that arise when the AIS does not meet an identified need: it is driven by a modernization project.<br>The AIS's low contextual relevance diminishes its credibility among users.<br>Automation of the task reduces professionals' awareness of discrimination.<br>Less experienced counselors quickly gain competence thanks to AIS. |
| Other impressive features and challenges perceived | In this case, users recognize the power of the system but not always its relevance for the specific use case. This case generates expectations and ideas for the integration of AI systems. This argues for "pull" approaches. |

## Case 4: Maintenance

| | |
|---|---|
| Industry/Type of work | Aircraft |
| Eligible departments and services | Engine maintenance |
| Interviewee sector | End-users |
| Purpose of AI implementation | Supporting the activity and cost competitiveness of its maintenance and servicing branch, as well as leveraging the abundant available data to enhance and improve existing predictive maintenance solutions. |
| Functions of AI systems and products | Operating through an image analysis platform, the AIS allows technicians to "flag" (take a screenshot of the anomaly) the image as soon as an engine fault appears, in parallel with AI in a human-machine cross-analysis. The generated fault is then measured, characterized, and determined by the technicians. Based on this expertise, the AIS automatically generates a detailed study report referring to the appropriate sections of the technical documentation. |
| Main users | Borescope operator. |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | The AI system replaces a human-machine duo with a 100% machine counterpart. This substitution is poorly received. They denounce a degradation of human relations and an overburdening of the technician who now works alone.<br>The system increases the identification of faults, which increases workload. However, it simultaneously reduces data entry tasks.<br>The experts fear a loss of know-how |
| Other impressive features and challenges perceived | This case demonstrates the prevalence of the work collective culture on the adoption of AI systems. Autonomous collectives are more accepting of AI systems compared to collectives with highly directive management. |

## Case 5: Hiring

| | |
|---|---|
| Industry/Type of work | Research |
| Eligible departments and services | Human resources |
| Interviewee sector | Provider and End-user |
| Purpose of AI implementation | Improve the efficiency of recruiting engineers. |
| Functions of AI systems and products | The AI system incorporates a testing platform: shape (candidate's personality), drive (candidate's motivations), brain (candidate's cognitive abilities). After these tests, the recruiter receives reports, test comparisons, and a prediction of the candidate's suitability for the position available. |
| Main users | Human resources |
| Features and initiatives that are considered important concerning the GPAI questionnaire items | This case highlights an innovative approach to AI systems. On one hand, the use of the AI system is mandatory. On the other hand, the usage modalities are flexible. The recruiter can consult the results before or after the interview, and they are also free to interpret the matching score as they see fit. In practice, they are free to follow their intuition regardless of the candidate's analysis by the AI system. The manager does not have access to the analysis of the candidate by the AI system. |
| Other impressive features and challenges perceived | This case shows that the adoption of AIS is the result of an organizational compromise that puts the recruiter in a comfortable position regarding the AIS. According to the recruiter, this compromise allows them to feel fully responsible for the decisions. It should also be noted that this compromise goes against the supplier's usage recommendations, which advocate for thresholds: 80% is a match, less than 80% is in limbo, less than 50% is a "no go". |

## 2/ The questionnaire design

At the beginning of the questionnaire, respondents are divided into two categories based on whether they use an AI system in their organization or not. Consequently, non-users are questioned about their perceptions of AI, while users are invited to answer a dozen questions aimed at better understanding:

- The type of AI system used and the stage of the project (experimentation, deployment, deployed);
- The reasons for using the AI system;
- The obstacles encountered in implementing the AI system;
- The impacts of the AI system on work.

These impacts are examined based on 5 criteria:

1. Autonomy: It refers to the ability of the worker to become a subject, to experience themselves as the author of their work, to assert their choices, and to act on their own. The principle of autonomy contrasts authentic, expressive, and personal work with mechanical, dehumanized, and "abstract" work.

2. Know-how: Situated between knowledge and action, it materializes within the framework of an action by mobilizing different resources: knowledge, skills, and implementation capabilities that largely result from experience. Know-how is constitutive of identity, legitimacy, professional position, and, therefore, the uniqueness of the worker within their profession.
3. Responsibility: Responsibility expresses the duty to be accountable for one's actions, including all circumstances and consequences, that is, to assume their declaration, execution, and consequently, the reparation or even sanction when the expected outcome is not achieved. It can consist of the capacity, for a willing and conscious individual, to make a decision without prior reference to a higher authority, to provide reasons for their actions, and to be judged accordingly.
4. Interpersonal relationships correspond to the socialization function within an organization, where workers, in addition to achieving economic goals, form collectives guided by norms, values, reciprocity, and systems of solidarity.

5. The meaning of work can be defined individually as the contribution of one's work to self-construction, and collectively, through the contribution of one's work to the common good. The importance given to the meaning of work in contemporary societies demonstrates that work, beyond being a material activity, is a spiritual activity through which individuals position themselves socially.

## 3/ Main teachings

96% of respondents who reported using an AI system in their organization believe that AI has had a very positive or rather positive impact on their work. Non-users, on the other hand, are more cautious: half of them consider that AI will likely have no impact (40%), or even a rather negative impact (12%), on their work, profession, or industry.

All the dimensions of work considered in the survey are cited significantly as impact factors experienced or at risk by respondents, whether they are users or not. However, the evolution of skills and employee autonomy are the ones most frequently mentioned by AI users.

The survey also highlights the gap between the experienced impacts and those perceived by respondents as future risks. The most significant gap concerns the evolution of interpersonal relationships: 29% of users believe that AI has impacted interpersonal relationships at work, while 43% of non-users see this dimension as a risk factor. In contrast, 72% of users report an impact of AI systems on their autonomy, while only 56% of non-users perceive this impact as a risk.

The impacts on the meaning given to work, the evolution of skills, and autonomy are indeed very high during the preliminary phases of the AI project (81%, 89%, and 92% respectively), but decrease once the project enters the deployment phase or when it is already deployed. Conversely, the impacts related to employee empowerment and interpersonal relationships seem to remain stable or even increase as the project progresses.

## III/ Untraditional Workforce - Mexico Students' Community

Fig. Example of the UNAM Student Community conducting interviews and participatory design sessions with workers in Latin America.

In the summer of 2023, a dynamic student community emerged in Mexico, guided by Professor Norma Elva Chavez and GPAI Expert, Dr. Saiph Savage. These computer engineering students from the National Autonomous University of Mexico (UNAM), along with peers from the United States, conducted quantitative research on the perspectives of untraditional workforces in Latin America about AI, and how they imagine future AI in their jobs. In a comprehensive study involving interviews with 20 workers and managers, it was unveiled that, astonishingly, each member of this workforce was already utilizing AI in their daily tasks. There was a universal acceptance and incorporation of AI in their professional environment. However, a notable void was identified in the availability of specialized AI tools tailored to their specific job requirements. The participants predominantly relied on off-the-shelf commercial AI products, with ChatGPT being a common choice. This reliance underscored a gap in the market for more customized AI solutions that could potentially enhance efficiency, productivity, and job satisfaction among the diverse professions in Latin America.

Inspired by their findings, the UNAM student community created novel AI-enhanced tools tailored for the region. Together, these students from both countries are actively shaping the future of AI in Latin America, showcasing the power of international collaboration.

**Defining the Traditional and the Untraditional/Informal Workforce**

The untraditional or informal workforce comprises individuals who engage in economic activities without formal employment contracts, often lacking access to traditional job benefits and protections. Gig work, characterized by its short-term and flexible nature, is a significant component of this informal workforce, particularly in Latin America. Recognizing the challenges faced by gig workers, we conducted a study focusing on their needs and aspirations, as well as how they imagined the future of AI tools. To support this workforce, we embarked on designing AI tools tailored to their circumstances and that matched their imaginaries. Our goal is to bridge the support gap and empower gig workers, acknowledging their growing presence in the informal workforce and unique challenges in Latin America.

## 1/ Summary of Findings: Latin American Workforce and AI Usage


- **AI in Latin America is embraced in the workplace**: Instead of apprehension surrounding AI, the sentiment was overwhelmingly positive.

- **Lack of AI Push by Management:** In Latin America, managers usually don't mandate the use of AI for their employees. While companies might have AI technology, they often don't have specialized AI tools. Furthermore, employees are typically not informed or educated about the AI systems in place.

- **Worker-Initiated AI Adoption:** Workers in the region have independently adopted AI technologies. They primarily rely on commercially available solutions, like ChatGTP.

- **Mismatch Between Needs and Technology**: Existing AI solutions do not address the specific needs and challenges of the Latin American workforce.

- **Our Response:** Recognizing this gap, we created culturally-aware generative AI tools tailored for the Latin American workforce, ensuring more effective support.

Our research journey began by interviewing workers across various sectors in Latin America, seeking to gain insights into their interactions with artificial intelligence. One striking observation emerged - it was not predominantly the management or organizations pushing specific AI tools onto these workers. Instead, what stood out was the proactive adoption of AI technologies by the workers themselves. This intriguing phenomenon piqued our curiosity and prompted us to delve deeper into its understanding. In our quest for comprehension, we narrowed our focus to the informal digital knowledge workers in Latin America, a group intrinsically intertwined with AI algorithms from the very outset.

There has been a notable increase in the reliance on gig workers from Latin America to power various AI systems. Surprisingly, despite the growing significance of this workforce, they often remain in the shadows, with their needs, experiences, and potential support systems largely overlooked. The predominant focus has been on boosting their productivity rather than delving into who they truly are and how we can best provide support.

In a concerted effort to shift the narrative surrounding gig work, this research embarked on a journey to bridge this knowledge gap. We initiated a comprehensive study, comprising interviews and participatory design sessions, engaging directly with gig workers from Latin America. Our aim was to gain a profound understanding of their needs, confront the challenges they encounter, and explore their visions for future AI tools.

## 2/ Interviews

We conducted a comprehensive study involving a total of 20 workers and managers from different Latin American countries to gain insights into their experiences and perspectives on AI in the workplace. This group was composed of 15 gig workers who are actively engaged in fields such as software engineering, content creation, and data annotation. In addition to these, there were 5 individuals from more traditional roles, including a digital marketing specialist, the CEO of a digital marketing firm, a graphic designer, a tech support engineer, and an industry researcher. To delve deeper into their thoughts and experiences, we utilized the questionnaire used by previous Student Communities, which we tailored to ensure its relevance to the participants' respective professions. Through this survey, we aimed to understand not only their current interactions with AI tools but also their vision for the ideal AI tools of the future.

Our findings revealed that all interviewees were not only aware of AI but also actively integrated AI solutions into their work processes. Notably, tools like ChatGPT and Microsoft's Co-Pilot played a pivotal role in aiding gig workers, particularly in tasks related to coding, where these AI companions proved invaluable. Additionally, ChatGPT was commonly employed to enhance their English language skills, demonstrating its versatility. **Importantly, none of the interviewees expressed fear or apprehension about the use of AI in the workforce.** Instead, they welcomed AI as a valuable resource that complemented their efforts. Our interviews revealed a significant finding: even with their widespread use of AI, gig workers believed that existing AI tools, including ChatGPT, fell short in addressing certain needs. **Interestingly, in Latin America, the narrative differed from other regions**. **There wasn't an active initiative by management to embed AI into the workplace.** While they didn't oppose its use, **there was a notable absence of provision for specialized AI software to assist their workforce.** Recognizing this gap, we embarked on participatory design sessions, aiming to collaboratively tailor AI tools to better serve the unique needs of gig workers in the region.

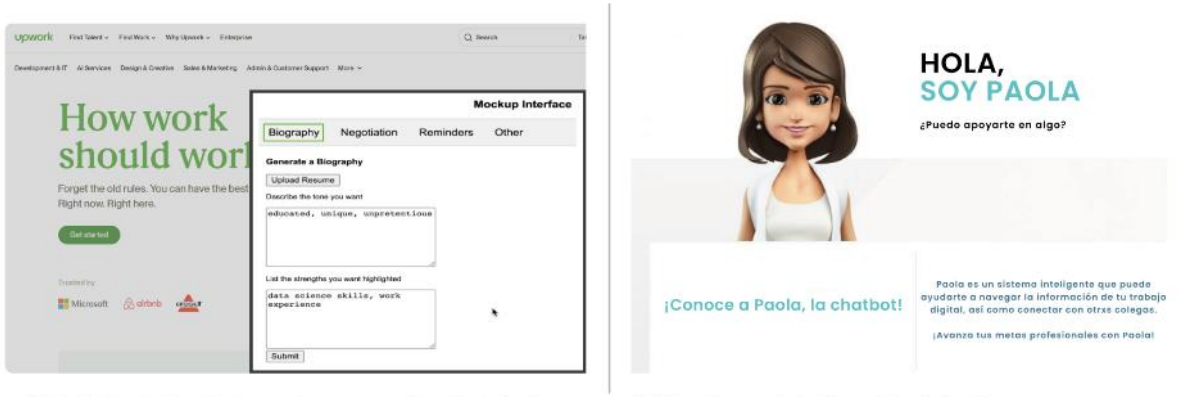
## 3/ Participatory Design Sessions

Our study included participatory design sessions to identify principles on how to best design AI enhanced tools that will support gig workers. We engaged Latin American gig workers for our research through Upwork, extending invitations to a diverse range of individuals. Our objective was to acquire insights regarding the preferences and requirements related to generative AI tools. Participants were compensated with $10 for their participation in a 30-minute study session. We utilized Upwork's filters to specifically target professionals in fields such as content writing, translation, and data entry, all of which are susceptible to potential displacement by generative AI. After initial introductions, we began by gathering information about the participants' backgrounds, their previous involvement in gig work, and their experiences, if any, with generative AI. To ensure that everyone had a common understanding of generative AI, we provided a detailed explanation, complete with a demonstration using ChatGPT as an illustrative example, regardless of whether participants had prior knowledge of the technology. We also asked participants about their familiarity with generative AI, including any encounters with it in their work, and invited them to share their viewpoints on this technology.

Following this knowledge-sharing phase, we moved on to conduct our participatory design sessions. During these sessions, we presented participants with various prompts related to generative AI. For each prompt, participants were encouraged to contribute at least one idea, and the researcher maintained a "hands-off" approach, allowing participants to independently generate their thoughts. We placed a strong emphasis on fostering creativity and inspiring the development of generative AI tools that each participant personally deemed valuable. Our

participatory design sessions, which were conducted with gig workers from Latin America, prominently highlighted their vision for intelligent assistants that would not only assist in client interactions and offer task guidance but also nurture their professional development. What sets these prototypes apart is their cultural relevance and customization. Recognizing the specific context of Latin American gig workers, we ensured that our AI-enhanced tools were designed to resonate with their cultural nuances. This means that the intelligent assistants and algorithms embedded within the tools are finely tuned to address the challenges and opportunities these workers encounter in their day-to-day work.

## 4/ Generative AI-Enhanced Tools for Latin American Gig Workers




**a)** Web Plugin that integrates generative AI to help freelancers with their profiles.

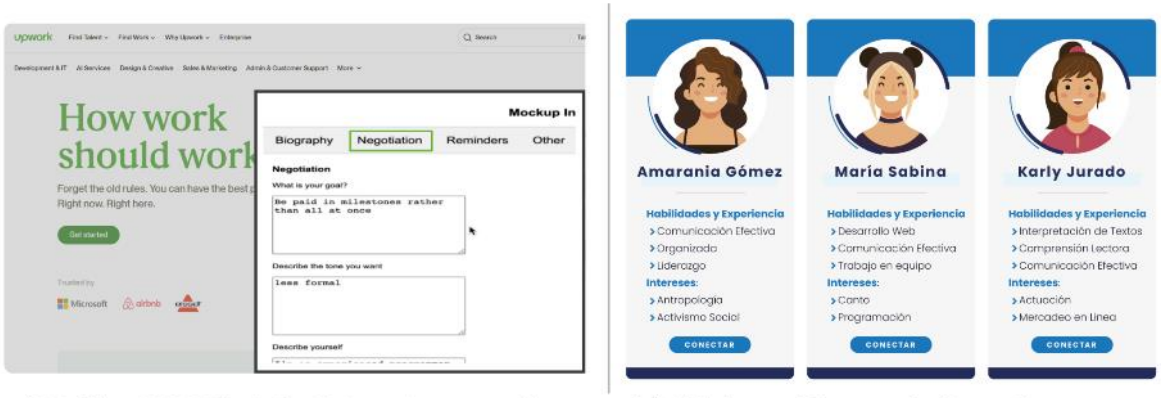
**b)** Freelance Intelligent Assistant

**Fig.** 1 Example of the AI-Enhanced Tools for Freelancers we have been creating and researching.

In the following we describe the definition of the prototypes that emerged from our study. These tools are designed to enhance their efficiency and effectiveness while operating within their existing work environments. We describe our tools in the following:

1. **Profile Analyzer:** In Latin America, novice freelancers often find it challenging to create compelling profiles. Our tool uses generative AI to analyze successful profiles and provides guidance on content and style, considering cultural nuances in self-presentation.
2. **Freelance Intelligent Assistant:** Recognizing the isolating nature of freelance work, we aim to offer culturally relevant AI guidance and support. Our AI assistants integrate culture theory to align with the needs of Latin American freelancers, including underrepresented groups in the region, such as Afro-Latinas or gig workers from rural or indigenous communities.
3. **La Independiente:** Our interviews uncovered that Latin American gig workers wanted their own independent space (outside of gig platforms) where they could connect with each other. We thus created an entire platform, “La Independiente”, which integrates generative AI assistance to freelancers, offering resources and advice to overcome work-related challenges. Additionally, it serves as a community-building resource for freelancers to collaborate and support one another, considering the importance of shared digital resources in the Latin American context.
4. **Community Suggester:** Latin American freelancers often seek connection-building opportunities. Our AI-driven recommendation system helps freelancers connect with peers, consider coaching from experienced workers, and make informed decisions

about work-related social connections, respecting their cultural preferences for social connections and support.




a) Intelligent Web Plugin that integrates generative AI to help freelancers with their negotiations.

b) AI-Enhanced Community Suggestor

Fig. 2 Examples of the AI-Enhanced Tools for Freelancers we have been creating and researching.

These AI tools are designed to resonate with the cultural values, challenges, and aspirations of gig workers in Latin America, ensuring their relevance in this specific context.

## 5/ Next Steps

The next pivotal phase in our journey involves conducting comprehensive user studies with our AI-enhanced tools. These studies will be instrumental in assessing the effectiveness and real-world impact of these systems in the dynamic context of Latin America's gig economy. The significance of this work cannot be overstated. By diligently designing AI tools tailored specifically to the needs and aspirations of Latin American gig workers, we are not only addressing a pressing gap in the technology landscape but also actively contributing to the empowerment and professional success of this vibrant and diverse workforce. Through rigorous user studies, we aim to gain deep insights into how these AI tools integrate into the daily routines and workflows of Latin American gig workers. We will examine their experiences, gather feedback, and refine our tools based on their invaluable input. Ultimately, this iterative process will culminate in AI solutions that truly resonate with the cultural nuances and unique challenges faced by Latin American gig workers, fostering a stronger sense of community and professional growth within this vital segment of the global workforce.

Our commitment to designing AI tools for Latin America is not just a technological endeavor; it is a testament to our dedication to inclusivity, cultural sensitivity, and the pursuit of equitable opportunities for gig workers in this region. As we embark on these user studies, we look forward to further enriching our tools and making a lasting impact on the gig economy in Latin America and beyond. Note that the research we are conducting in Latin America holds significant potential for applicability beyond this region, especially in areas where official management support for the workforce may be lacking. Our findings shed light on a paradigm where workers themselves take the initiative to adopt and integrate AI tools into their labor processes independently. This approach can be incredibly valuable in regions facing similar challenges, as it empowers workers with the tools they need to enhance their efficiency and productivity autonomously. By understanding and replicating the success stories from Latin America, we can develop adaptable strategies that enable workers in diverse global contexts to harness AI technologies independently, thereby fostering a more inclusive and self-sufficient workforce.

# Conclusion

In conclusion, the Observation Platform of AI at the workplace project stands as a testament to the importance of global collaboration in the realm of AI research and its application in the workforce. It encapsulates diverse perspectives from around the world, each contributing unique insights into how AI is reshaping labor across varied contexts.

From Japan, under the leadership of FoW Experts Arisa Ema and Yuko Harayama, the project inherits a legacy of meticulous research informed by cultural subtleties. Their work promises to extend into 2024, ensuring a continuous and culturally cognizant understanding of AI in the workplace. This attention to regional particularities is crucial, as it underscores that the impact of AI is not monolithic but varied across different cultural landscapes.

Meanwhile, France, represented by Yann Ferguson of LaborIA, offers a vital European viewpoint, with a specific focus on the experiences of traditional workers in stable jobs. The French research delves into the longitudinal effects of AI deployment, enriching the project with detailed before-and-after implementation analyses. This more conventional perspective provides a foundational understanding of AI's integration into established work environments.

Contrasting with France's focus on traditional employment, the Mexico Student's Community, steered by FoW Expert Saiph Savage, has broken new ground with its pioneering focus on gig workers. Through empathetic engagement and innovative design, these students have developed human-centric AI tools that cater to the gig economy. This focus has not only generated a new subset of the student research community dedicated to the gig workforce but has also set a precedent for how student-led initiatives can lead to tangible benefits for an emerging and often underrepresented segment of workers.

The Mexico Student's Community's work, alongside the Japanese and French contributions, forms a rich mosaic of research that collectively advances our understanding of AI's diverse impact on the global workforce. Each community, with its tailored approach, highlights the varied facets of AI integration and the importance of considering both cultural nuances and employment types.

Together, these international efforts underscore the potential for student communities to influence and shape the AI landscape with a focus on inclusivity, cultural sensitivity, and adaptability. The collective findings and methodologies of the project paint a comprehensive picture of AI's multifaceted influence on labor and underline the necessity for a harmonious approach that is attuned to the specific needs of workers worldwide, whether they are in stable, traditional roles or navigating the fluid dynamics of the gig economy.