AI, employment and skills in Argentina

Evidence, early warning, and policy instruments

Presentation agenda

1) AI-Ar and the Early Warning System – What it measures, how it works, and its uses

2) Application to Records – Scope, sources, and signal analysis.

3) Challenges – Mismatch between training and demand; gaps by territory/company; frameworks for responsible use.

4) Strategies – Lines of action in training, intermediation, and social dialogue.

Early warning system + AI-Ar Index

• The first "thermometer" of the potential impact of AI on formal work, developed in 2023 by the Ministry of Labor, Employment, and Social Security (MTEySS) and the CID (UBA–MINCyT).

• It integrates registered employment data with a task model (GPT-4) to estimate substitution/complementarity and build an exposure map.

• Combined with statistical techniques, it is used to anticipate warnings that allow for adjusting training and focusing policies.

Impacto de la Inteligencia Artificial generativa en el empleo asalariado registrado del sector privado:
diagnóstico y respuestas de política

Ministerio de Trabajo, Empleo y Seguridad Social
Argentina

Exposure vs. Effect: From technical potential to workplace reality

What is "Exposure"? A theoretical ceiling

Exposure measures the **technical potential** for an AI to perform or accelerate a task today. It answers the question: "Can an AI like GPT-4 perform more than 50% of this task?"

The scenario measured by the Index:

This index **does NOT predict the future.** It shows what would happen in a maximum-impact scenario, if generative AI were adopted in every production process where it's technically possible, without considering immediate barriers like costs, company culture, regulation, or union agreements.

It represents the maximum possible impact if the technology were fully deployed today.

From potential to effect: How does exposure materialize?

Once an occupation is deemed "exposed," this technical potential can translate into two main effects on work. The actual effect will depend on the nature of the tasks, the company's strategy, and regulations.

Effect	Description	Example
Complementarity	AI assists the worker, increasing their speed, quality, or scope. This leads to greater productivity and the creation of higher-value tasks.	GPT-4 drafts a report, and the human analyst reviews, validates, and adds their expert interpretation, making the work faster.
Substitution	AI replaces all or a large part of the tasks previously done by a person. This can reduce demand for that position and require a worker to retrain.	Robotic Process Automation (RPA) software automates routine accounting data entry, eliminating the need for a data entry role.

Potential impact of Generative AI on the Argentine Labor Market

◆ **54% of formal private employment** in Argentina (≈3 million jobs) is in occupations where ≥50% of tasks are automatable by generative AI.

◆ **Higher exposure in skilled occupations:** Managers (99%), professionals (91%).

Unskilled workers: Only 6% have high exposure.

◆ **Most exposed sectors:** Finance (93%) and Private Education (92%). Trade (~71%), Health, Real Estate, Social Services.

Low exposure: Construction, Agriculture, Fishing (~10–20%).

◆ **Similar exposure by company size:**

Large companies: 56% of employment with ≥50% automatable tasks.

Small companies: 51%. Gap: 5 p.p.

◆ **Complementarity > Substitution:**

71% of employment would be **enhanced** by AI.

Only 22% is at risk of **complete substitution** (administrative roles).

For every one replaceable job, there are 3 where AI would **assist tasks**.

What are we seeing today (Nov 2022 – Dec 2024)

Jobs with high AI exposure have grown more

Key data: Δ+7.06 points (high exposure vs. low exposure).

Coverage: 5.5 million people, 349 occupations (90.7% of private employment).

Total private employment also increase: +2.88%.

Where it is expanding (complementing): Finance +32,5 p.p.; Agriculture +28,0 p.p.; Industry +10,8 p.p.; Trade +6,6 p.p.

Where it requires attention: Health −7,6 p.p.; Community services −6,4 p.p.; Electricity/gas/water −5,3 p.p.

Notable case: **Programming/IT (CIIU 62):** total employment −7,4% (professionals −25,3%; admin −2,1%) → they are undergoing an internal reorganization process.

There is no evidence of mass displacement, but there is a clear need for sector-specific policies and targeted reskilling.

Prioritary challenges

- Mismatch between educational offerings and labor demand due to accelerated changes from AI.
- Sectoral/territorial heterogeneity; SMEs have less capacity to adapt.
- Reallocation from repetitive tasks to roles involving análisis/creativity/management.
- Ensuring results: evaluation and certification recognized by employers.
- Governance: responsible use, data/privacy, biases, and transparency

Strategies – Training and Skills

- AI literacy (introductory and ML modules) for workers.
- Professional training and skill-building programs: digital literacy and reskilling.
- Micro-credentials (language, math, digital skills) with clear pathways and employer recognition.

Strategies – Employment and intermediation

- Vocational/career profiling + recommender systems on the Employment Portal (with bias auditing and human review).
- Entrepreneur self-assessment and advisory services for responsible AI adoption.
- Integration of employment-education-training data to guide programs and budget allocation.

Strategies – Social Dialogue and Governance

- EMINC: updating collective bargaining agreements for the age of AI with equal representation.
- Evidence first, inter-institutional coordination, and proactive debate.
- Responsible use frameworks: transparency, biases, and data privacy.