

SESSION:

DATA QUALITY IN THE AGE OF AI:

THE EVOLVING ROLE OF

PROBABILITY BASED PANELS IN

A QUALI-QUANT WORLD

CIPHER, Washington, DC, Feb 2026

Presented by Arundati Dandapani, Founder & CEO Generation1.ca

RESEARCH OBJECTIVES FOR THIS SESSION

- Are probability-based methods sufficient in an AI-mediated data ecosystem – or must they evolve to remain trustworthy?
- How can probability- and non-probability-based designs be augmented with AI and synthetic data to expand representation while preserving statistical integrity and governance safeguards?
- What institutional frameworks (e.g. governments and intergovernmental organizations) are required to maintain high-quality evidence in an increasingly blended qualitative–quantitative–AI enabled environment?

PRESENTATION –

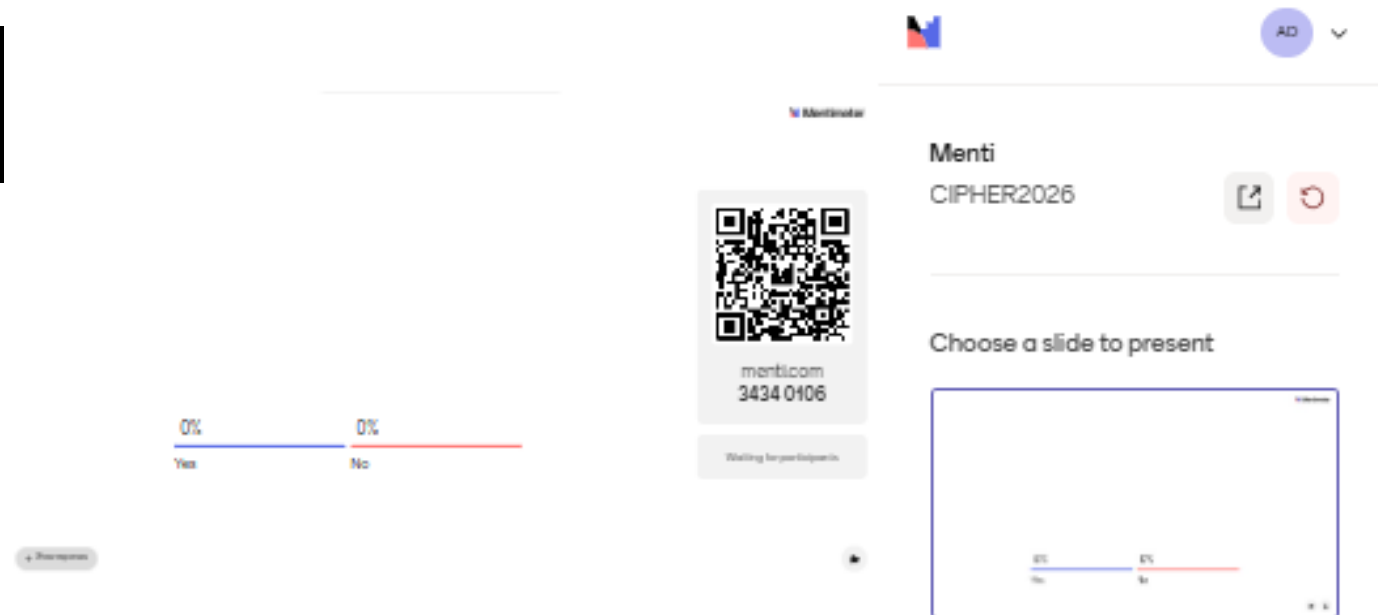
SYNTHETIC DATA:

METHOD OR MIRAGE?

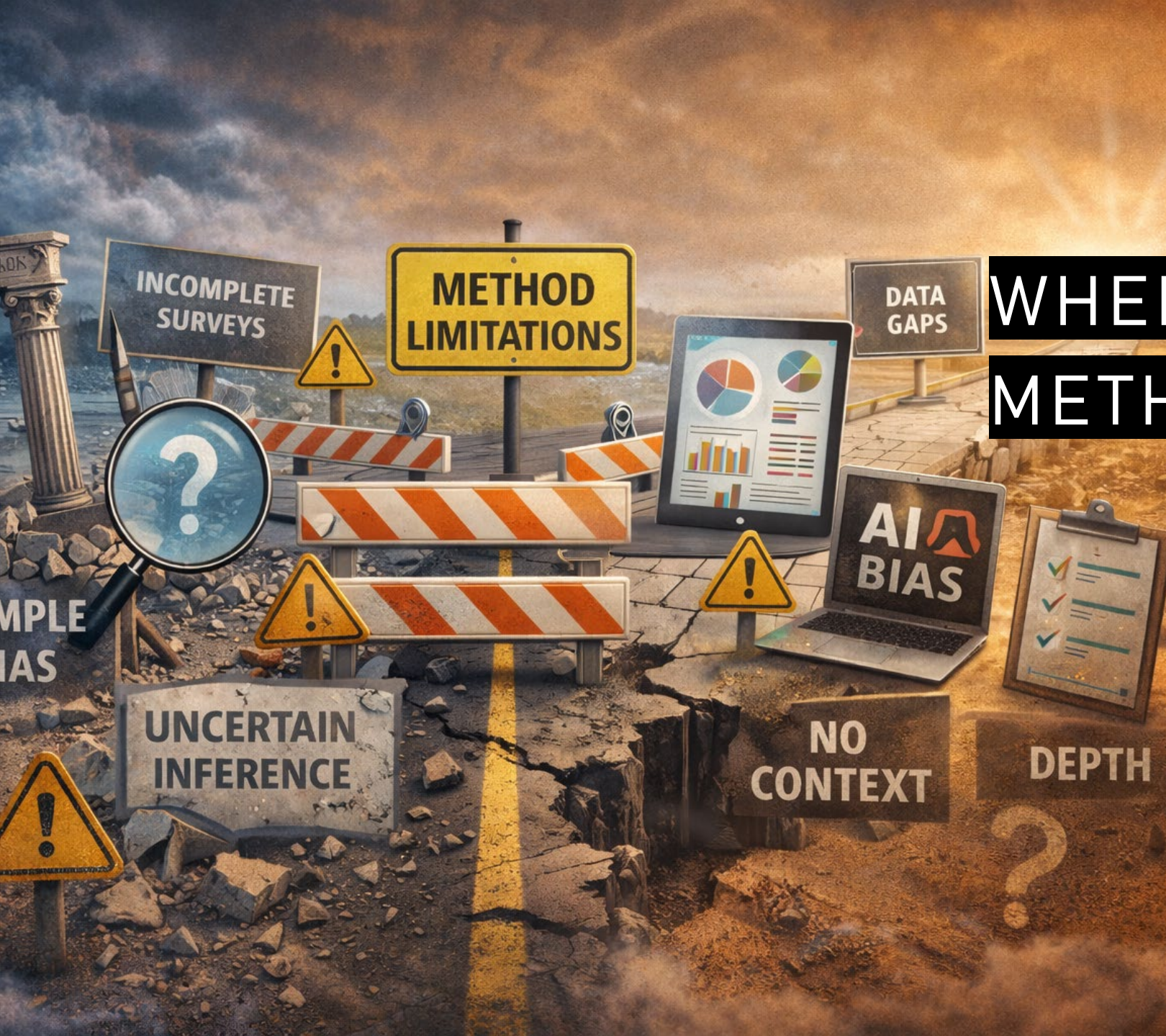
AI Governance Trade-Offs in an Unstructured World.

HAVE YOU EVER USED SYNTHETIC DATA TO ADVANCE YOUR RESEARCH OUTCOMES?

PLEASE SCAN THE QR CODE TO INPUT YOUR RESPONSE
in this MENTIMETER POLL!

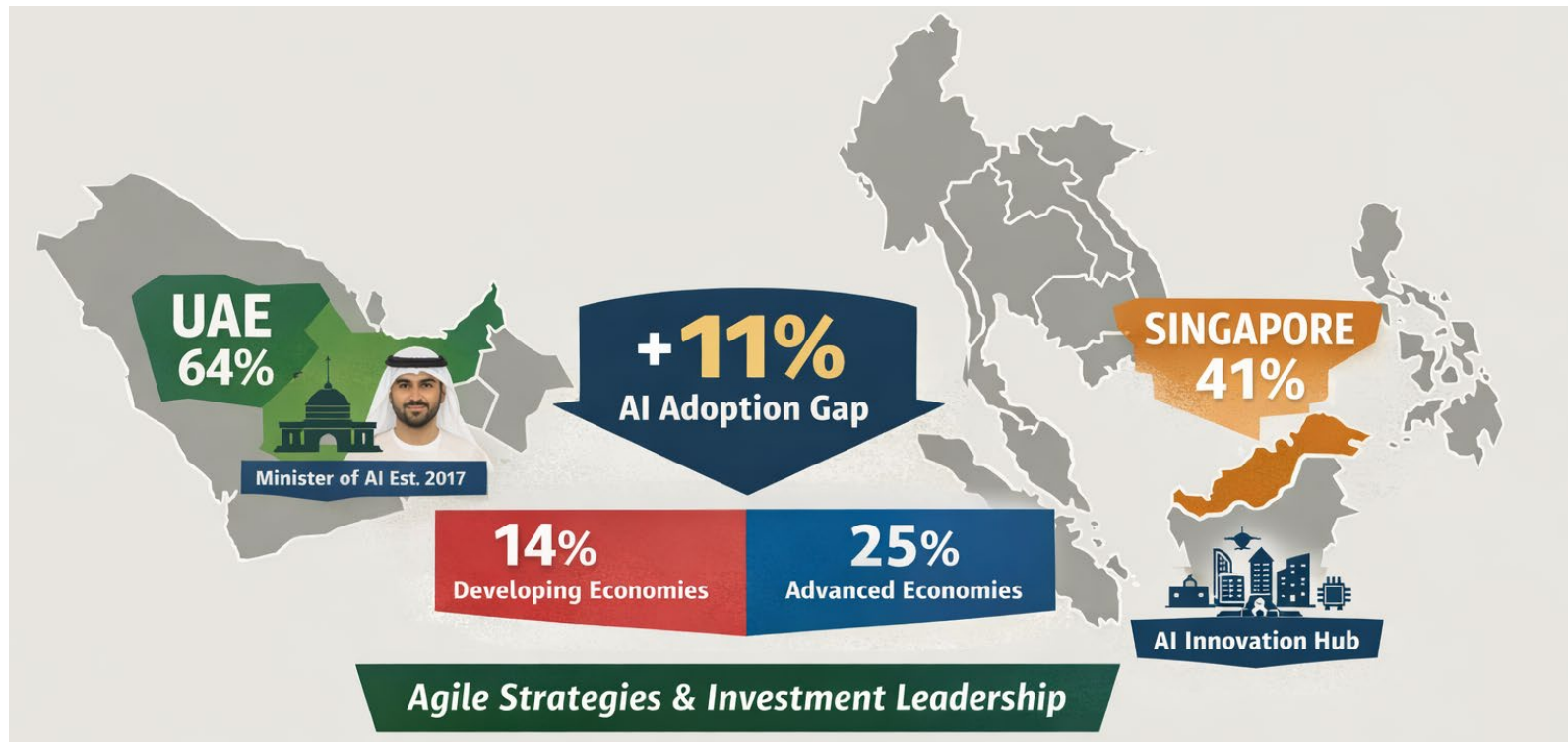


WHERE TRADITIONAL METHODS STRUGGLE



- Hard to Reach Populations
- Outliers
- Cultural context / nuance
- Emerging Trends
- Respondent Fatigue

GLOBAL RESEARCH IMPLICATIONS: WHO LEADS IN AI?



Source: Microsoft AI Economy Institute. (2025). *Global AI adoption 2025*. Microsoft. <https://www.microsoft.com/en-us/corporate-responsibility/topics/AI-Economy-Institute/reports/Global-AI-Adoption-2025/>

AI HAS SHIFTED FROM ANALYSIS TO AGENCY

- Compute and Algorithms require (Good) Data to be Productive, Efficient, Viable, Commercial.
- AI has moved from drafting and summarizing (data analysis) to finding and connecting (across knowledge sources) to deciding and executing (agentic AI)
- AI is multi-modal.

Source: Vector Institute. (2026). Remarkable 2026 livestream broadcast: Event hub.

https://vectorinstitute.swoogo.com/remarkable__2026_livestream-broadcast/event-hub

AI GOVERNANCE PLURALITIES

Tradeoffs are a mask for the lack of prioritization needs assessed based on a project's scope.

- What stands between Utility / Value and Privacy Preserving tech? (Risks of Reidentification)
- Innovation and Regulation? (Lack of Accountability)
- Transparency and Security? (Black Box Methods)
- Access and Control? (Unclear Hierarchy or Lack of Role Based Access for Data Minimization and Purpose Limitation Protocols)

ASSESSING AI SYSTEMS FOR HARMS

Risk Rating = Severity of Harm X Likelihood of Occurring

Component	Severity (1-5)	Likelihood (1-5)	Risk Rating	Level
Coding open-ended data	3	4	12	Medium
Synthetic data augmentation	4	4	16	Critical
Modelling on census groups	3	3	9	Low
Overall (1 is lowest, 5 is highest)				

Mitigate risks of AI in public opinion research with human oversight, bias audits, transparency disclosures, and hybrid human-AI workflows.

This table is illustrative only and does not represent a definitive score or judgment regarding the level of harm associated with these methods.

Formula Source: National Institute of Standards and Technology. (2023). *Artificial Intelligence Risk Management Framework: AI RMF 1.0* (NIST AI 100-1). US Department of Commerce. <https://doi.org/10.6028/NIST.AI.100-1>

WHAT IS GENERATION1.CA?

A federally incorporated 10+ year old non-profit professional settlement service community organization (NGO) with 2000+ members across Canada and USA:

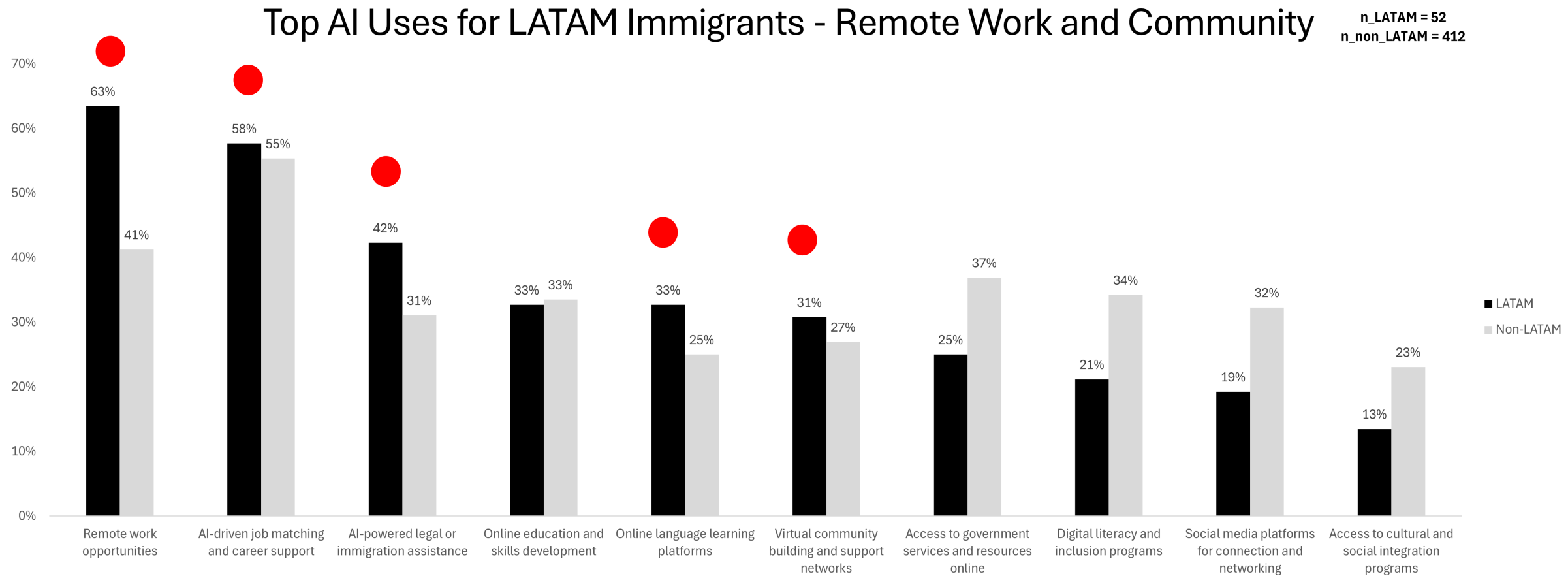
- We turn immigrant / newcomer ambition into jobs, career mobility, and professional integration. We are building a mega-verse of fluent global citizens.
- We create skills, pathways, credentials, networks to help top global talent and those hiring them.
- We unite employers and immigrants, create and shape industries with immigrant futures powered in intercultural empathy, data innovation and excellence.



76%

Generation1.ca immigrants seek better access to job opportunities and career advancement for immigrants as the top change they want. This was followed closely by streamlined immigration processes and faster pathways to residency / citizenship. [Q. If you could make one change in North America to create a more inclusive environment for immigrants, what would it be? N = 156 Generation1.ca members in Canada and US, 3X Boost - N (CB) = 464] A similar proportion – 3 in 4 or 75% believe technology including AI platforms will impact the settlement experience in the next 3-5 years.

3X BOOST MODELLED ON CENSUS MICRODATA YIELDS PATTERNS AND REALITIES



LOGISTIC REGRESSION: EXCLUSION/BIAS

INFLUENCES IMMIGRANT INTENT TO LEAVE

Barriers to Immigrant Retention	Drivers of Immigrant Retention
<p>Experienced bias & discrimination ↓ Only statistically significant <i>negative</i> predictor of staying based on a logistic regression. Holds across all datasets (n=400+). Overwhelms effects of job status, education, and visa type.</p>	<p>Future-oriented digital skills readiness (AI) ↑ Strong positive predictor of staying. Immigrants confident in AI, tech and evolving labour markets plan long-term futures in North America.</p>
<p>Social exclusion + negative experience (harm)</p>	<p>Social inclusion + economic opportunity</p>

WHEN REPRESENTATION IMPROVES, OUTCOMES CHANGE

Predictor	Coefficient (β)	p-value	Interpretation
bias_faced	-0.231	0.042	Experiencing bias lowers odds of higher stay category by ~20–25% (stat sig negative).GISS-2025-Q1-Q19-1.xlsx
prep_AI	0.372	0.002	AI skill confidence strongly increases stay odds (~30–40% shift upward).GISS-2025-Q1-Q19-1.xlsx
full_time_work	0.376	0.074	Full-time employment marginally boosts stay propensity.GISS-2025-Q1-Q19-1.xlsx
prep_automation	-0.233	0.056	Automation unreadiness slightly reduces stay odds (marginal).GISS-2025-Q1-Q19-1.xlsx

The ordinal logistic regression confirms key drivers of immigrants' intentions to stay in North America (Boosted CA dataset, n=464). Bias/discrimination experiences significantly reduce stay propensity ($\beta=-0.231$, $p=0.042$), while AI preparedness boosts it ($\beta=0.372$, $p=0.002$).

GOVERNANCE GUARDRAILS FOR HYBRID EVIDENCE SYSTEMS

- Synthetic AI must be anchored in real human data — community organizations safeguard reality.
- Principles guide. Laws bind. Know both.
- Automate where risk is low. Keep humans where stakes are high. Monitor the future!



THANK YOU!

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Connect with Arundati and
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