

Digital Traces for Peace

Using Online and Search Data for Conflict Prevention and Peacemaking

Peacebuilding

Misinformation

Science diplomacy

AI analysis

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Roadmap for the next 45 minutes

We will answer three questions:

- What changed in peacebuilding and humanitarian careers in the last year?
- What new pathways are opening at the intersection of data, tech, and peace?
- What should young professionals be doing now to be ready?

Digital traces are not a technical gimmick, but a practical bridge between listening, analysis, dialogue, and action.

Session flow

- 1 Sector shifts
- 2 Methods and skills
- 3 IIASA + science diplomacy
- 4 Asian peace discourse example
- 5 Career action plan



What changed in the last year about careers in peacebuilding and humanitarianism?

The field became more digital, more anticipatory, more information-centric, and more interdisciplinary.

AI moved mainstream

70% of surveyed humanitarians reported using AI daily or weekly, but only 3.5% had expert AI knowledge.

Data got operational

OCHA estimates 74% of crisis data across 22 operations is now available and up-to-date, with growing use of climate and non-traditional data.

Peace work went more digital

UNESCO's Social Media 4 Peace expanded in 2025, reflecting rising demand for skills around harmful content, fact-checking, and online resilience.

Science diplomacy gained urgency

UNESCO and IIASA alike positioned science diplomacy as a way to keep dialogue open amid geopolitical tension and disruptive technologies.

Implication for students: International affairs only is no longer enough. Data literacy, platform literacy, and communication literacy now matter too.

Emerging pathways for young professionals

Using evidence, communication, and context to reduce harm and support dialogue.

Information management

Turn messy data into dashboards, briefings, and coordination products for humanitarian or peace teams.

Misinformation and trust

Track harmful narratives, support fact-checking, and help institutions respond without inflaming tensions.

Early warning and foresight

Monitor shifts in attention, fear, grievance, or rumor and connect them to scenario planning.

Civic tech and dialogue

Design participatory tools, moderation workflows, and public-facing analysis that helps people talk across divides.

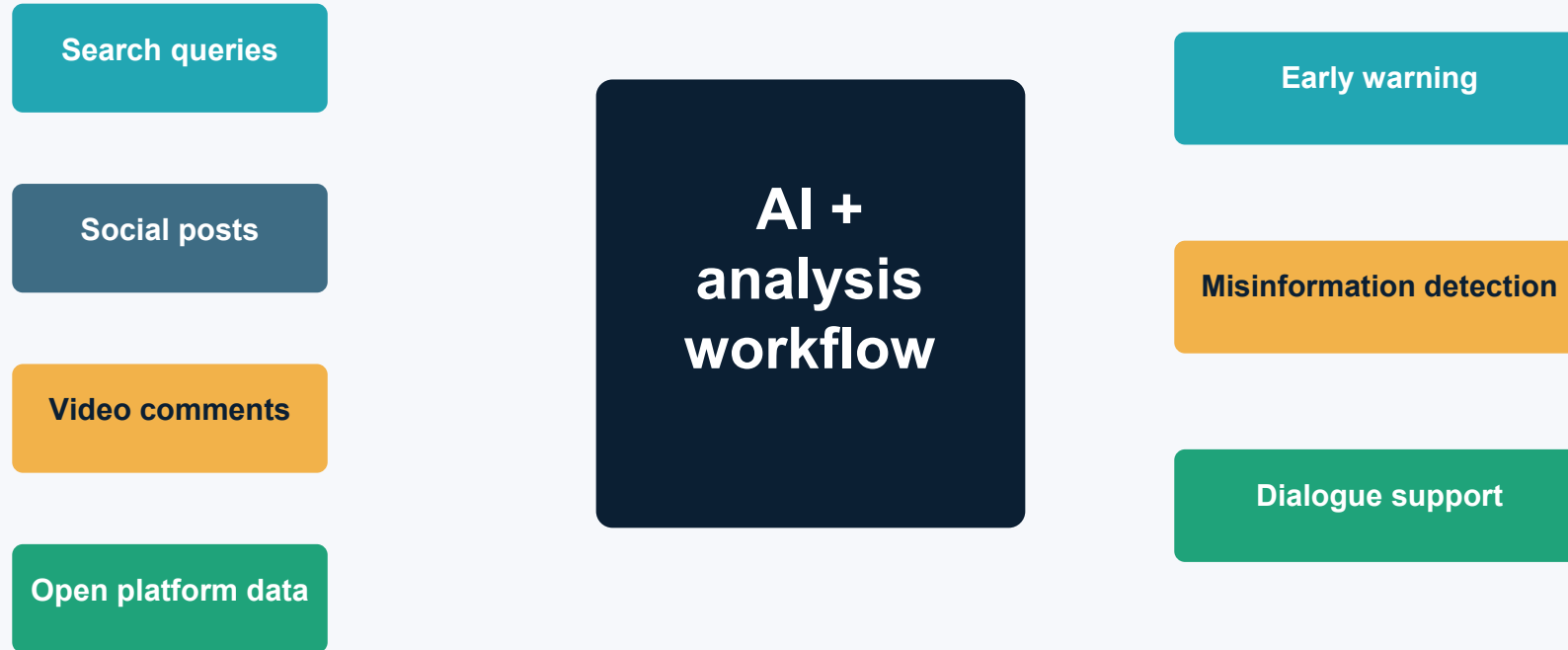
Science policy and diplomacy

Translate evidence into dialogue-oriented outputs for ministries, international organizations, and research institutes.

Typical outputs

dashboards · briefs · scenario notes · moderation protocols · fact-check explainers · stakeholder maps

What are digital traces?



Why this matters

- It is fast.
- It is cross-border.
- It can reveal public anxieties before formal reports catch up.

From digital traces to conflict prevention and peacemaking



Three peacebuilding uses

- Anticipate escalation and identify where narratives are hardening.
- Counter misinformation that undermines trust and social cohesion.
- Bring empirical evidence into science-policy and science-diplomacy conversations.

What skills matter most now?

Skill stack for this field

Ethics, dialogue, and trust-building

Conflict analysis, regional knowledge, and media literacy

Data cleaning, search trends, NLP, visualization, and OSINT basics

Skills rising fastest across the wider job market

AI and big data



Technological literacy



Analytical thinking



Curiosity and lifelong learning



Learn enough tech to work with data, and enough humanity to not misuse it.

What should young professionals be doing now?

1. Learn by doing

- Build one real dataset project from start to finish.
- Practice turning messy online text into a short decision-oriented brief.

2. Add field context

- Take courses in conflict analysis, humanitarian action, media literacy, or regional studies.
- Work with multilingual material whenever possible.

3. Seek experiential spaces

- Student labs, capstones, civic-tech projects, simulations, fellowships, and NGO/IO internships all count.
- Document the process, not just the result.



Best preparation = one foot in methods, one foot in practice.

Students who can combine listening, analysis, and facilitation are unusually well positioned.

Why bring in IIASA and science diplomacy?

IIASA's science-diplomacy value proposition

- A neutral space where researchers from politically divided contexts can still work on shared problems.
- A good institutional home for work that links online signals, risk communication, and public dialogue.
- A bridge between systems analysis, policy insight, and trust-building.

Science diplomacy lens

UNESCO's 2025 ministerial dialogue explicitly framed science diplomacy as a tool for promoting dialogue and peace and for handling crises, shared resources, and disruptive technologies.



In this framing, digital traces are not just data. They are evidence for communication, coordination, and de-escalation.



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YSSP - Young Scientists Summer Program



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My research at this intersection

Google Trends and public sensitivity

Search data as a proxy for public attention around hazards and nuclear-risk communication.

YouTube discourse in nuclear emergencies

Sentiment, topics, emotions, and misinformation in online reactions after sensitive events.

Real-time AI monitoring of crisis discourse

Moving from reactive monitoring to proactive communication and narrative tracking.

Cross-platform and cross-topic applications

From climate and crisis narratives to misinformation and scenario building.



Use online behavior as an empirical signal for better communication, foresight, and policy dialogue.

This is where digital-trace analysis becomes relevant for peacebuilding.

Case study

Asian peacebuilding discourse online

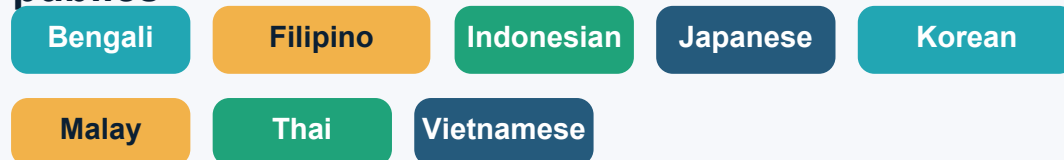
Using YouTube videos and comments in eight Asian languages to see how peace is framed, contested, and amplified online.

This shows the kind of multilingual, applied, policy-relevant analysis that is increasingly valuable.

How the study worked



Eight language publics



This is not AI replacing expertise. It is AI helping researchers work across scale and language, while still requiring interpretation, ethics, and local knowledge.

Main findings from the Asian peace discourse study

Video clusters in the study



Three findings to remember

- Across languages, peace discourse was largely supportive, hopeful, and civil.
- Entertainment, music, and motivational formats reached wider publics than explicit peace or human-rights content.
- When misinformation appeared, it tended to cluster with negative sentiment and unsupportive stances.

The challenge is the small fringe that can still distort the conversation.

What peacebuilders can learn from this example

Lesson 1

Do not only broadcast peace, listen for how peace is already being framed by different publics.

Lesson 2

Use locally resonant emotions and formats. Hope, devotion, nostalgia, pride, and calm do not look the same everywhere.

Lesson 3

Target the hostile fringe precisely instead of treating entire online communities as toxic.

Local emotional frames matter

Bengali

devotion + spirituality

Japanese

historical memory

Thai

nostalgia + emotion

Vietnamese

pride + patriotism

What roles can this preparation lead to?

Humanitarian information / data analyst

Can clean data, visualize trends, and brief teams clearly.

Digital peacebuilding or misinformation analyst

Can track harmful narratives and recommend responses.

Research assistant in conflict, media, or platform studies

Can handle multilingual content and mixed methods.

Science-policy / science-diplomacy support roles

Can translate evidence into dialogue-oriented outputs.

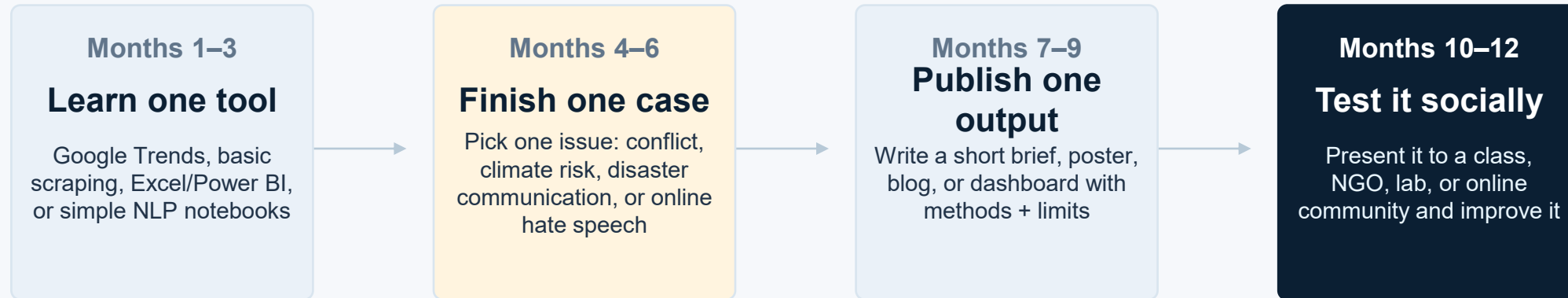
Risk communication or stakeholder-engagement analyst

Can connect online signals with public concerns and trust.

What recruiters or supervisors look for

one real project · concise writing · ethical awareness · multilingual comfort · ability to explain findings without jargon

A practical 12-month portfolio plan



Portfolio outputs that travel well

1-page brief

Notebook

Dashboard

Methods appendix

Reflection on limits

This is how you become legible to employers, labs, and mentors.

What responsible digital-trace work requires

Privacy & consent

Use public data carefully; avoid exposing vulnerable people or creating new risks.

Representation

Online signals are not the whole population; platform bias and language bias matter.

Interpretation

AI labels are helpful, but false positives, missed nuance, and sarcasm remain real problems.

Use in practice

The goal is not surveillance; it is better communication, prevention, and dialogue.

This is why experiential digital-peace education should always include ethics, uncertainty, and reflection and not just tools.

Closing thought

**The future of peacebuilding needs people
who can work with**

data dialogue and diplomacy

**and who can stay ethical, humble, and useful while
doing it.**

Thank you · Q&A