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NLP for Legal Applications


Department of Computer Science Retreat

UBC

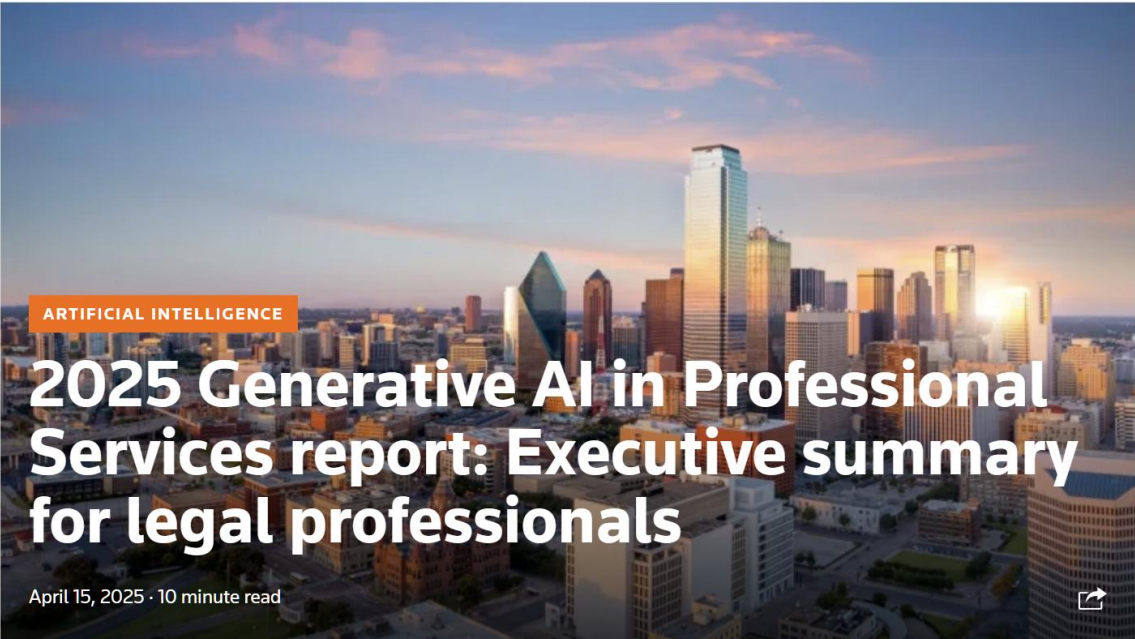
Maksym Taranukhin

May 4, 2026

26% of legal professionals reported already using GenAI



LEGAL Products Solutions Insights Support center



ARTIFICIAL INTELLIGENCE

2025 Generative AI in Professional Services report: Executive summary for legal professionals

April 15, 2025 · 10 minute read

<https://legal.thomsonreuters.com/blog/genai-report-executive-summary-for-legal-professionals-tri/>

Canada lawyer under fire for submitting fake cases created by AI chatbot

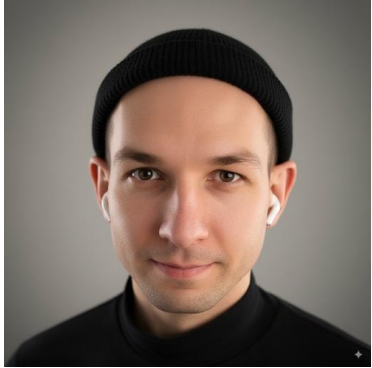
Chong Ke, from Vancouver, under investigation after allegedly using ChatGPT to cite case law - but those cases did not exist



The judge found Ke took steps to correct her errors. Photograph: Michael Dwyer/AP

<https://www.theguardian.com/world/2024/feb/29/canada-lawyer-chatgpt-fake-cases-ai>

Empowering Air Travellers: A Chatbot for Canadian Air Passenger Rights



**Maksym
Taranukhin**



**Sahithya
Ravi**



**Evangelos
Milios**



**Gábor
Lukács**



**Vered
Shwartz**



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DALHOUSIE
UNIVERSITY



I need help with a canceled flight and damaged luggage. Can I get on another flight without paying more, and what should I do about the luggage?

🔍 Results

What are the policies for getting on another flight after a flight cancellation?

Flight Cancellation: Departing from the EU or EEA

Your Options: Continue or Cancel Trip The airline must offer you the choice between continuing or cancelling your trip. If you choose to continue your travel, the airline must offer you the choice between: transportation to your destination at the earliest opportunity; or transportation to your destination at a later date, subject to availability of seats. If you choose to cancel your trip, the airline must transport you to the first point of departure at the earliest opportunity, and refund your ticket.

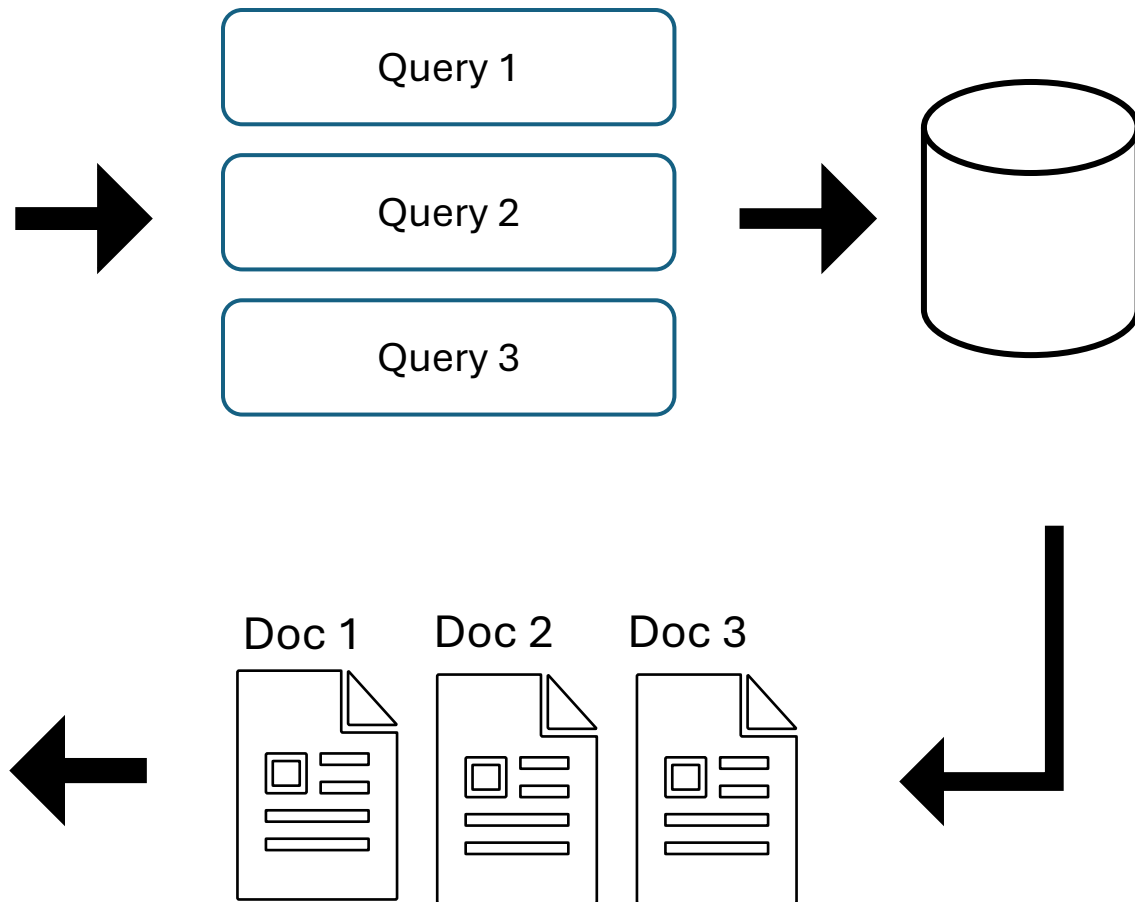
What steps should be taken when luggage is damaged during a flight?

Damaged Baggage: Step by Step Guide

Inspect your baggage As soon as you take it off the carousel, inspect your baggage. Document any and all damage to your baggage Take photos. Record a video with your phone. Report the damage at the airport

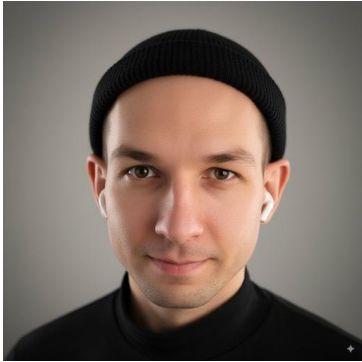


Ask your question or describe your issue...



InfoGatherer:

Principled Information Seeking via Evidence Retrieval and Strategic Questioning



**Maksym
Taranukhin**



**Shuyue Stella
Li**



**Evangelos
Milios**



**Geoff
Pleiss**



**Yulia
Tsvetkov**



**Vered
Shwartz**



Under submission. <https://arxiv.org/abs/2603.05909>



Hi. How can I help you?

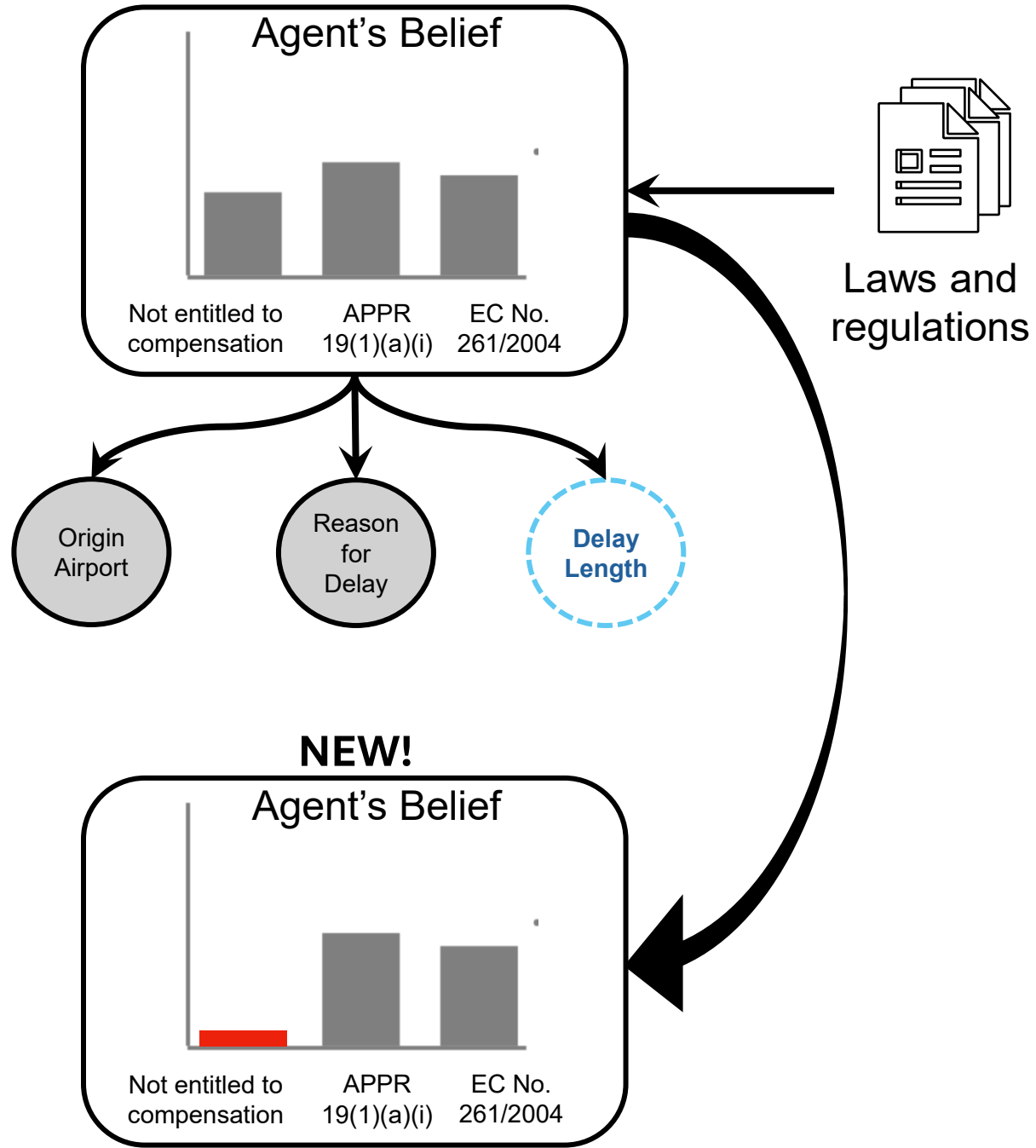


My flight was delayed and the airline refused to compensate me. What should I do?

How long was **the delay**?



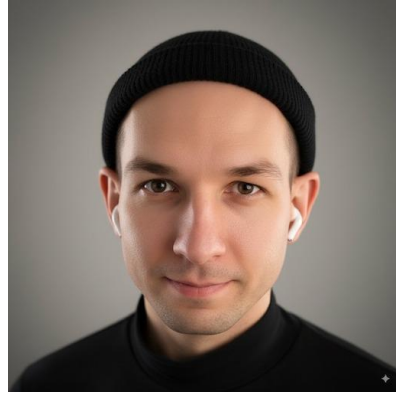
Around 5 hours



CanLegalRAGBench: Evaluating Retrieval-Augmented Generation on Canadian Case Law



Ethan Zhao



Maksym Taranukhin



Moira Aikenhead



Wei Cui



Vered Shwartz

Industry Partner



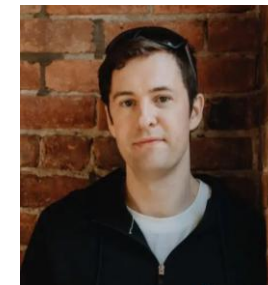
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PETER A. ALLARD
SCHOOL OF LAW

THE UNIVERSITY OF BRITISH COLUMBIA



Alistair Vigier



In preparation

1. Choose a case law

2. Generate a user query

3. Collect answers from experts

584 data points

PRI Management v Balakrishnan, 2021 SKORT 425 (CanLII)

Source: Saskatchewan Office of Residential Tenancies
Date: 2021-02-11
File number: 211607; 211657; 211658
Citation: PRI Management v Balakrishnan, 2021 SKORT 425 (CanLII), <https://canlii.ca/t/jd8h>, retrieved on 2026-04-30

**OFFICE OF RESIDENTIAL TENANCIES
SASKATCHEWAN**

File #211607/211657/211658

Citation: PRI Management v Balakrishnan, 2021 SKORT 425
Date: 2/11/2021
Hearing Officer: Randall King
Judicial Centre: Regina

BETWEEN:

PRI Management

- and -

Karthik Balakrishnan and Silambarasi Anbarasan

Appearing:

Bobbi-Jo Laurans and Louise Zimmer for the Landlord
Karthik Balakrishnan, self-represented

NATURE OF APPLICATION AND ONUS:
[1] The Tenant has made an application pursuant to section 33 and 70 of *The Residential Tenancies Act, 2006* for a disposition of the security deposit. The Tenants seek additional damages from the Landlord for breaches of the Tenants' rights. The Landlord seeks to retain the security deposit and seeks damages in excess of it.

HEARING DETAILS:
[2] A hearing was held on February 8, 2021, at Regina, Saskatchewan.

PARTICIPANTS:
[3] Evidence was presented or given by the following persons: Bobbie-Jo Laurans and Louise Zimmer, and Karthik Balakrishnan.

SERVICE OF DOCUMENTS:
[4] The Letter of Hearing was properly served by regular mail. The Tenants were served electronically with the Landlord's damage claim. The Tenant provided proof the Landlord had been served with the Tenants' claim, although the agents for the Landlord advised they had not received the notice. After I advised the agents for the Landlord of the nature of the Tenants' claim, the Landlord was prepared to move forward with the hearing.

ARGUMENTS, EVIDENCE AND FINDINGS:
[5] The rental unit address is (rental address). The tenancy began on August 1, 2018, and ended on October 31, 2020, following proper notice given by the Tenants. The security deposit is \$1,100.00. This amount has been paid in to the Office of Residential Tenancies to be held in trust pending the outcome of this hearing.

[6] I will deal with the Landlord's claim and the security deposit first. The Landlord seeks the following:

Cleaning, 20 hours at \$20.00 per hour	\$400.00
--	----------

Batch: 1 Go Instructions Example 00:00:00 Start

Loaded previous draft Save Draft Submit Batch

QUERIES

Query 1 My municipality is preventing me from running a small business...

Query 2 My municipality is preventing me from running a small business...

Query 3 What are the judicial interpretations of the doctrines...

Query 4 Regarding the doctrines of claim and issue preclusion, what are...

Query 5 (Variation) My municipality is preventing me from running a small auto repair...

Query 6 (Variation) Under what circumstances can a court prevent someone from...

Query 7 (Variation) In a case where a municipality asserts "res judicata" or...

Query 8 (Variation) Our municipality is currently defending against a property...

Query 1

My municipality is preventing me from running a small business storing things on my property, which I believe is causing me significant financial losses and is completely unfair. I tried to pursue a claim against them, but the court has indicated that I can't move forward because this matter has supposedly already been settled, or that I had a chance to argue it before. I'm really concerned because I don't feel like I've had a proper opportunity to present my full case, especially my feeling that I'm being discriminated against. Can a court really stop me from bringing a new legal challenge if I still think I'm being treated unjustly? What exactly determines if an issue is considered 'already decided' and how does that prevent me from trying to get a different outcome?

LAW AREA
administrative law, civil procedure

Answer this query in the jurisdiction of Northwest Territories.

Query Evaluation

1. Is the query well-specified?
Can you clearly understand the core legal issue being asked?
Yes, the legal issue is clear

2. Is it appropriately scoped?
Does it have a reasonable amount of facts (not overly complicated)?
Yes, the complexity is reasonable

Good:
"Can a landlord evict a tenant in winter in Alberta for non-payment?"

Bad:
"Tenant problems what to do?" (Too vague).

Good:
"What is the penalty for a first-time DUI in Ontario?"

Bad:
"DUI, plus a divorce, the partner owns the car registered out-of-province, and the dog bit an officer." (Too many intersecting facts).

Evidence Documents 6 LOCKED (Read-Only)

Final Answer Workspace
Review the AI generated output here, or write your own synthesized final response.

Based on the provided evidence, the legal principle that may prevent you from bringing a new legal challenge is called issue estoppel. This doctrine is intended to balance the public interest in the finality of litigation with the need to ensure justice is done in a particular case (Danyluk).

Before issue estoppel can even be considered, it must be established that the earlier decision was made by a decision-maker acting in a judicial capacity. In the municipal context, a development authority acts judicially when it issues a formal development permit or stop order, but it does not act judicially when it merely informs a landowner in writing that it has received complaints and directs the landowner to take remedial steps. Informal letters and administrative correspondence are "nothing more than communications prompted by complaints" and cannot form the foundation for an issue estoppel argument (Black Diamond (Town)). If the prior proceeding in your case was informal enforcement activity rather than a formal adjudicative decision, issue estoppel likely cannot apply at all.

If the earlier decision was judicial, three preconditions must then be met for issue...

Takeaways

1

The Problem

LLMs hallucinate in legal practice with real consequences in court.

2

The Method

Reduce uncertainty before generating via strategic question asking.

3

The Yardstick

Measure legal grounding, not just fluency.

Toward legal NLP that is both useful and trustworthy.