DHISOLVE × E-COMMERCE

AI Chatbots Making Promises Companies Can't Keep

How structural decomposition eliminates AI hallucinations in e-commerce — with real incidents, real costs, and a proven architectural solution.

AI in E-Commerce Market: $8.65B (2025) ' $17–27B by 2030

THE PROBLEM

Why General-Purpose LLMs Fail in E-Commerce

REAL INCIDENTS

Air Canada's chatbot hallucinated a nonexistent 'bereavement fare' discount. Canadian tribunal ordered $812 in damages — ruling the chatbot IS the company. This precedent means every company now legally owns its AI's hallucinations.

$67.4B $67.4B in enterprise AI hallucination costs (2024, Forrester)

Tribunal ruled: chatbot = company. You own every hallucination.

KEY PAIN POINTS

- Chatbots fabricate return policies, invent product specs, misquote prices with complete confidence
- Each misleading answer triggers returns, escalations, and permanent trust damage
- Customers don't distinguish 'AI error' from 'your company lied to me'
- Enterprise AI hallucinations cost businesses $67.4 billion in 2024 (Forrester)

THE SOLUTION

Structural Decomposition: Specialists Beat Generalists

E-commerce queries span product specifications, pricing, inventory availability, shipping estimates, return policies, and promotions — each grounded in different data sources that change in real time.

A monolithic LLM has zero connection to your actual product database. It will confidently tell customers a product has features it doesn't have, quote prices that don't exist, and promise return policies you don't offer.

dhisolve routes product queries to models grounded in your real catalogue database. Policy queries go to models trained on your actual terms and conditions. Inventory questions are verified against live stock levels before any claim is made.

This structural separation makes it physically impossible for the AI to fabricate product details, because each response is grounded in your actual data — not the model's training data.

COST COMPARISON

DHISOLVE	BIG LLMS
$0.10–$0.50 per 1M tokens	**$10–$60** per 1M tokens

OUTCOMES

Measurable Results

Zero fabricated product claims — responses grounded in real catalogue data

Zero phantom inventory promises — verified against live stock levels

10×faster inference than GPT-4 class models

90%lower AI costs ($0.10–0.50 vs $10–60 per 1M tokens)

ROI CASE

Each hallucinated product claim costs $50–500 in returns/escalation handling. A fabricated policy promise (like Air Canada's bereavement fare) can cost thousands plus legal fees. At a company handling 100K AI-assisted customer interactions monthly, even 0.1% hallucination = 100 costly incidents.

With dhisolve:
• Product claims grounded in real catalogue: zero fabrications
• Customer trust preserved: AI responses match reality
• Support escalation reduction: 40–60%
• AI cost: $0.10–0.50/1M tokens vs $10–60 for general LLMs

REGULATORY COMPLIANCE

Built for Compliance, Not Bolted On

- Digital Markets, Competition, and Consumers Act 2024 (UK)
- Data Use and Access Act 2025 — must disclose when AI is used in decision-making
- FTC consumer protection enforcement for misleading AI claims
- Consumer protection laws in all jurisdictions apply to AI-generated claims

ACADEMIC & INDUSTRY BACKING

- *Berkeley BAIR: compound AI systems achieve 80% vs 30% accuracy (2024)*
- *RAG (Retrieval-Augmented Generation) reduces hallucination by grounding in real data*
- *RouteLLM: cost reduction without quality loss (ICLR 2025)*
- *Air Canada ruling established legal precedent: companies own AI outputs*

MARKET OPPORTUNITY

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