fficient Knowledge Base Population ith LLMs for Industrial Applications: A Space Mission Case Study

Cristian Berrío Aroca – cberrio@expert.ai
José Manuel Gómez-Pérez - jmgomez@expert.ai

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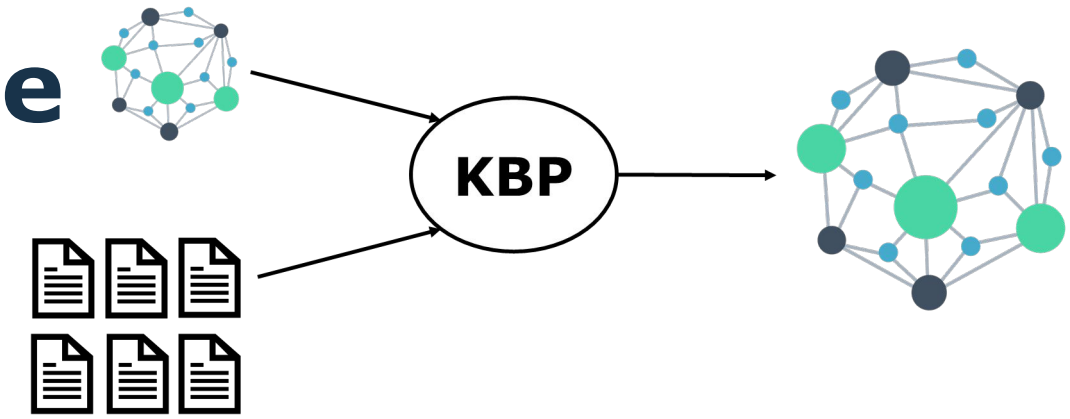
The Problem

Structured data from text is still hard

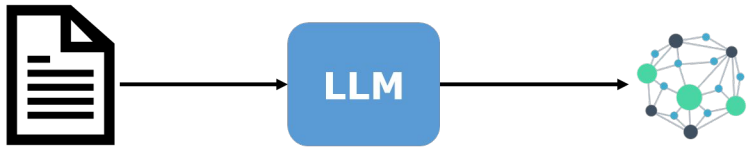
- Pipelines are complex
- Errors propagate
- Scaling is expensive



Why LLMs Changed the Game

Before: multi-step pipelines

Now: one model



BUT:
Expensive
Slow
Hard to deploy

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Our Idea

Use large LLMs once

Train small specialized models

- **Faster**
- **Cheaper**
- **On-prem**

How It Works (Intuition)

Key Result

~1B ≈ 12B performance

Runs on 1 GPU

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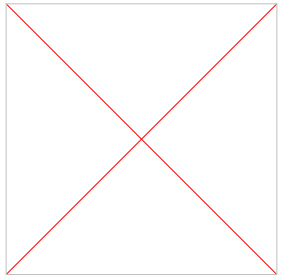
Rethink LLM usage

Large → data

Small → production



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Thanks

Linkedin.com/company/expert-ai

Twitter.com/expertdotai

info@expert.ai

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