

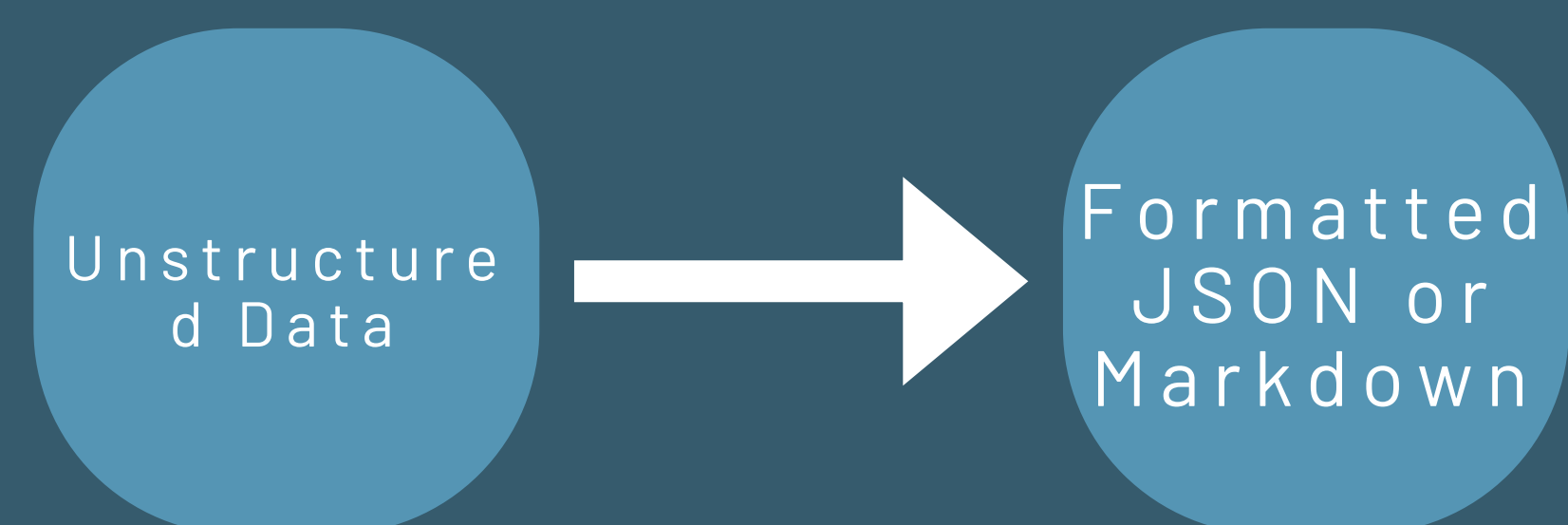
Background

Supply chains are fragile. Slow-moving data delays decisions, causing costly disruptions.

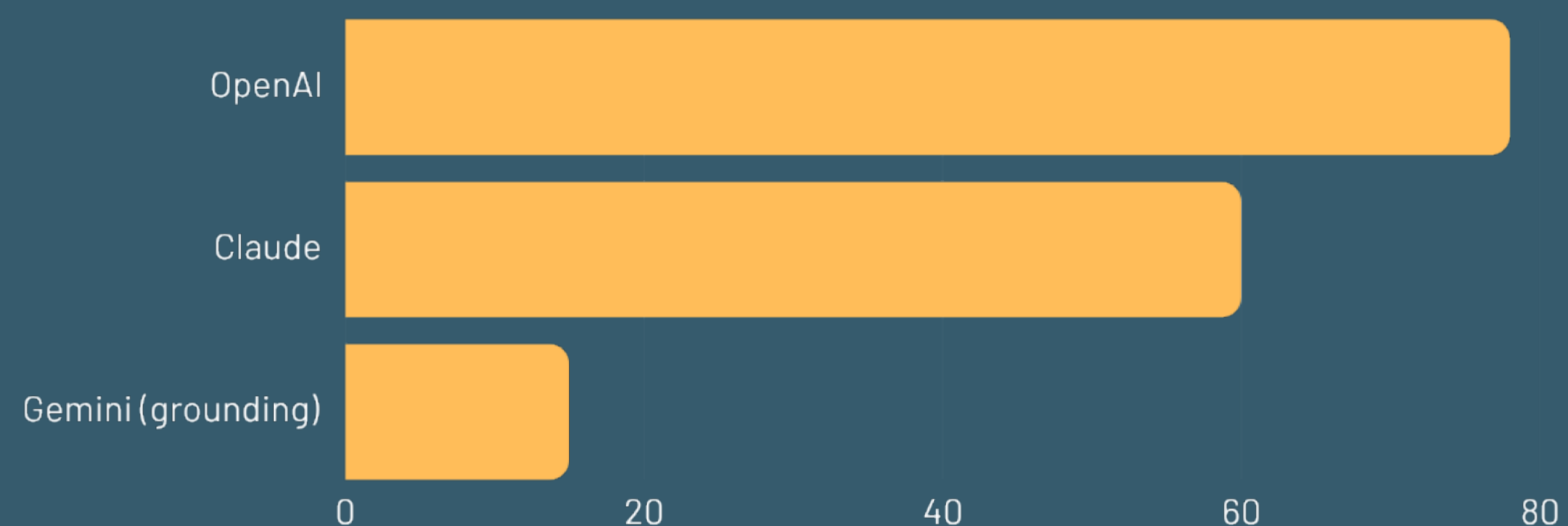
★ **Goal:** Turn messy news and media into actionable facts using AI ★

Methodology

- **Data Engineering:**
 - Tested OpenAI, Claude, and Grok via Open Router, and Gemini 1.5 Flash



- Hallucination Rates

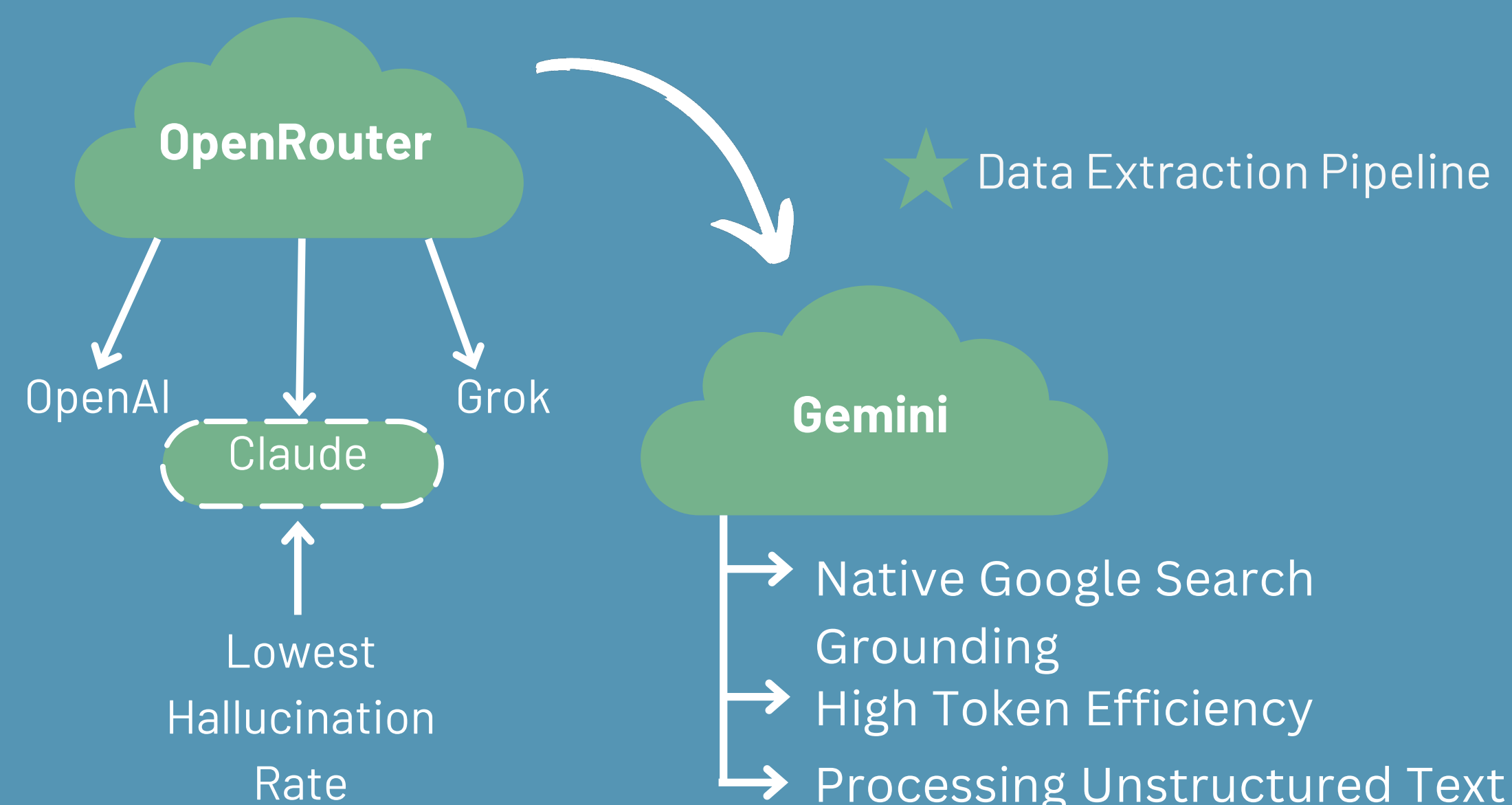


Multimodal Data:

- YouTube: Video content into text for analysis.
- PDFs: Agentic parsing and Regex to pull data from earnings reports.

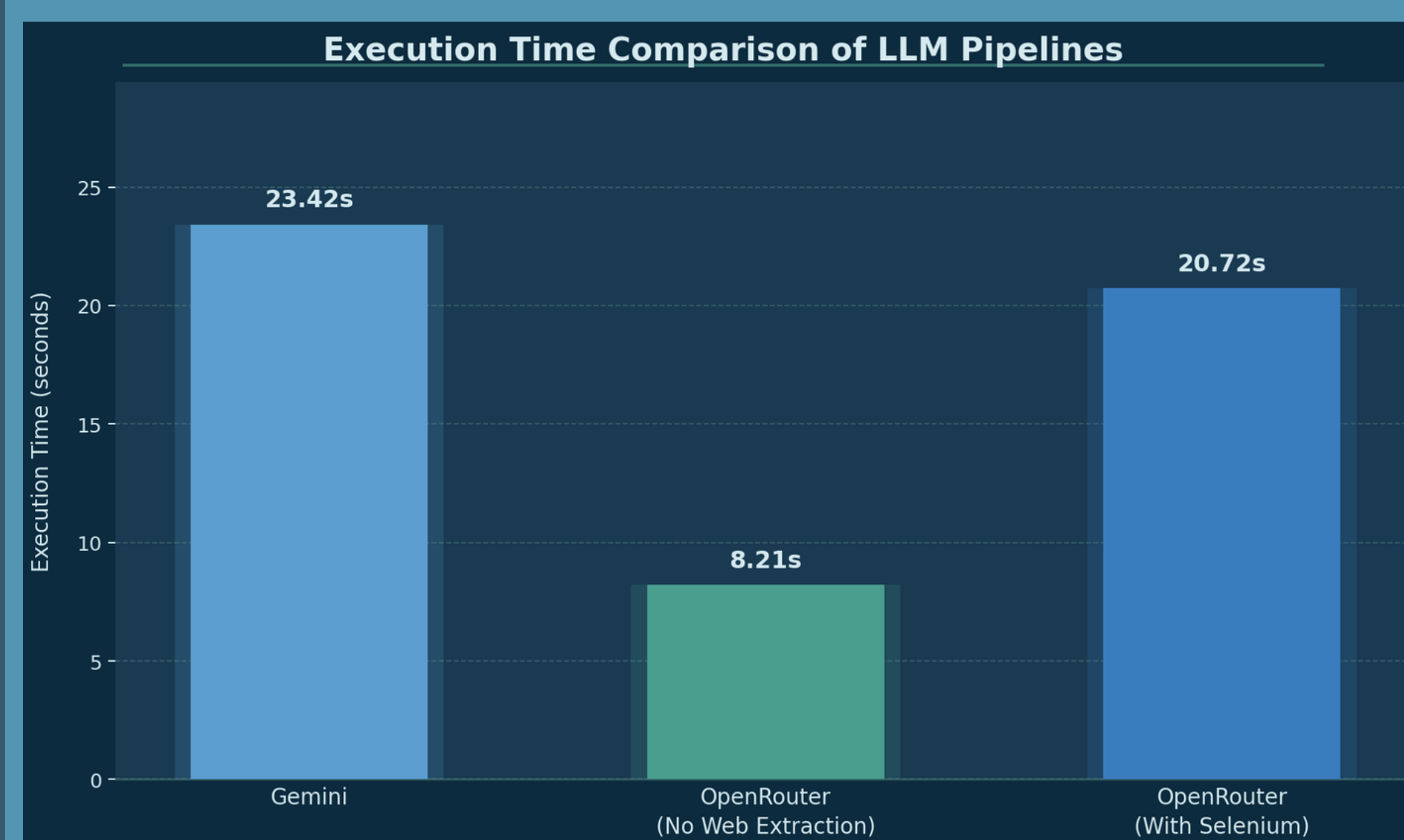
Search Integration:

- SERP API - scattered news and social media into a single insight feed.



Tools

- 🧠 Models - Gemini | Claude | OpenAI
- 🔌 APIs - SERP API | OpenRouter
- 🔧 Data - JSON | Regex | PDF Parsing
- 💻 Language - Python



Conclusions

- **Reliability:** Search grounding is essential; it prevents hallucinations by tying facts to live sources
- **Real-World Success:** The pipeline successfully flagged Pratt & Whitney material shortages and labor strikes
- **Multimodal Value:** Proved LLMs can pull data from YouTube, PDFs, and News into one clear view.

Future Goals

- 1 **Autonomous Agents:** AI suggested alternative suppliers and response email drafts
- 2 **Instant Alerts:** Automated notifications directly to mobile devices
- 3 **Digital Twins:** Simulations of hypothetical scenarios to practice disruption responses

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