distil labs

IBM Power Systems x ROCKETGRAPH

Private AI on IBM Power

Small Language Models Transform Graph Analytics
Complete Data Sovereignty • 10x Faster • 100x More Efficient

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The Enterprise AI Dilemma

The Challenge

Organizations want AI-powered natural language querying for graph databases, but cloud-based LLMs create insurmountable barriers.

Critical Issues

- Sensitive data must be sent to external servers
- Query patterns and schemas exposed to third parties
- 2-5 second response times per query
- High financial and environmental costs
- Compliance and regulatory roadblocks

The Breakthrough Solution

Small Language Models (SLMs)

A specialized Granite 3.3 8B model fine-tuned for Rocketgraph's OpenCypher queries, running entirely on IBM Power hardware.

Unlike massive cloud LLMs with over 1 trillion parameters, our SLM delivers targeted performance with just 8 billion parameters.

Key Principle

Specialization beats generalization when you know exactly what you need to accomplish.

Training Approach: Public documentation and synthetic data only - no customer information ever used.

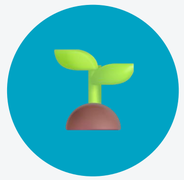
Four Pillars of Excellence

Complete Data Sovereignty

Runs entirely on your IBM Power infrastructure behind your firewall

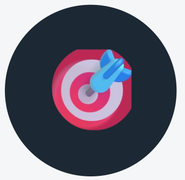
10x Faster

Sub-200ms query translation vs 2-5 seconds for cloud LLMs



100x More Efficient

Dramatically reduced energy consumption for sustainable AI



85% of Claude 4 Performance

Purpose-built for Rocketgraph OpenCypher queries

How It Works

Training Process

1. **Public Documentation** - Rocketgraph OpenCypher specifications
2. **Synthetic Data** - 900+ schemas, 15,000+ validated examples
3. **Fine-Tuning** - IBM Granite 3.3 8B specialized for OpenCypher
4. **On-Premise Deployment** - Your hardware, your control

Real-World Example

Natural Language Query:

"Show me all transactions over $10,000 involving accounts opened in the last 30 days"

Translated in <200ms

OpenCypher Query:

```
MATCH (a:Account)-[t:TRANSACTION]-()
WHERE t.amount > 10000
```

Performance Comparison

The Numbers Speak

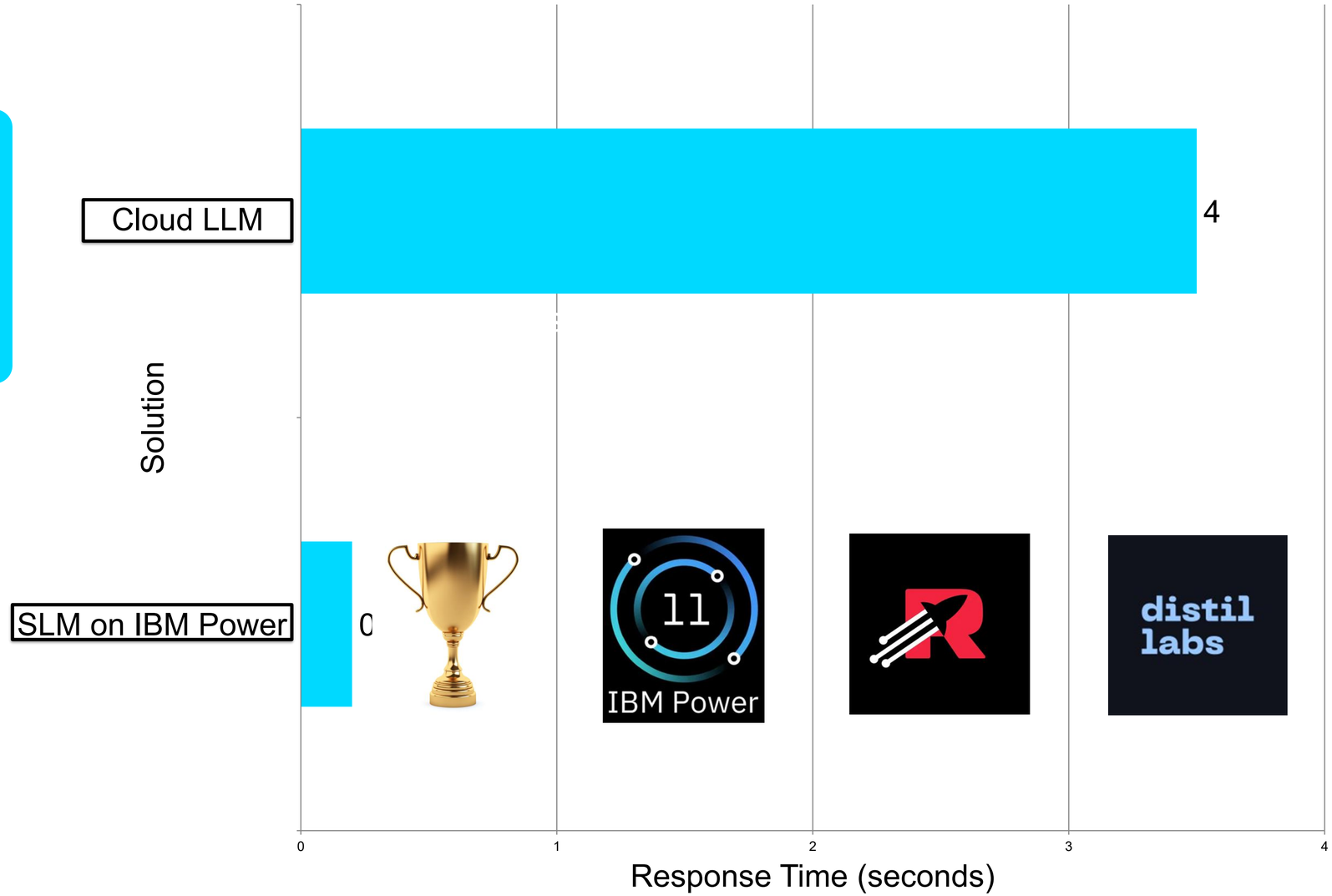
2-5s

Cloud Response Time

200ms

SLM Response Time on IBM Power

For fraud detection teams running hundreds of queries per hour, this speed difference is transformational.



Performance statement source: https://www.distillabs.ai/blog/distil-labs-enables-rocketgraphs-private-ai-on-ibm-power-with-small-language-models

Real-World Impact: Financial Services

The Scenario

Financial institutions analyzing transaction patterns for fraud detection need to query complex relationship graphs containing highly sensitive data.

The Requirements

- Zero data exposure risk
- Sub-second query response
- Regulatory compliance
- High query volume capacity

The Results

100%
Data Privacy

<200ms
Query Speed

No Limits
API Throttling

100%
Compliant

Powered by Industry Leaders

Rocketgraph

Graph-native analytics platform with OpenCypher querying

Distil Labs

Knowledge distillation experts enabling specialized SLM deployment

IBM Power

Enterprise-grade infrastructure with Granite 3.3 8B model

A collaboration proving that enterprises can adopt AI without compromising security, speed, or sustainability

Ready to Get Started?

For Rocketgraph Customers

- Runs on your existing IBM Power infrastructure
- No external dependencies or API keys required
- Seamless integration with current installation
- Full support from combined teams

Your data. Your control. Your SLM.

Learn More

Contact us to explore how SLMs can transform your graph analytics:

Technical Documentation:

`https://docs.distillabs.ai`

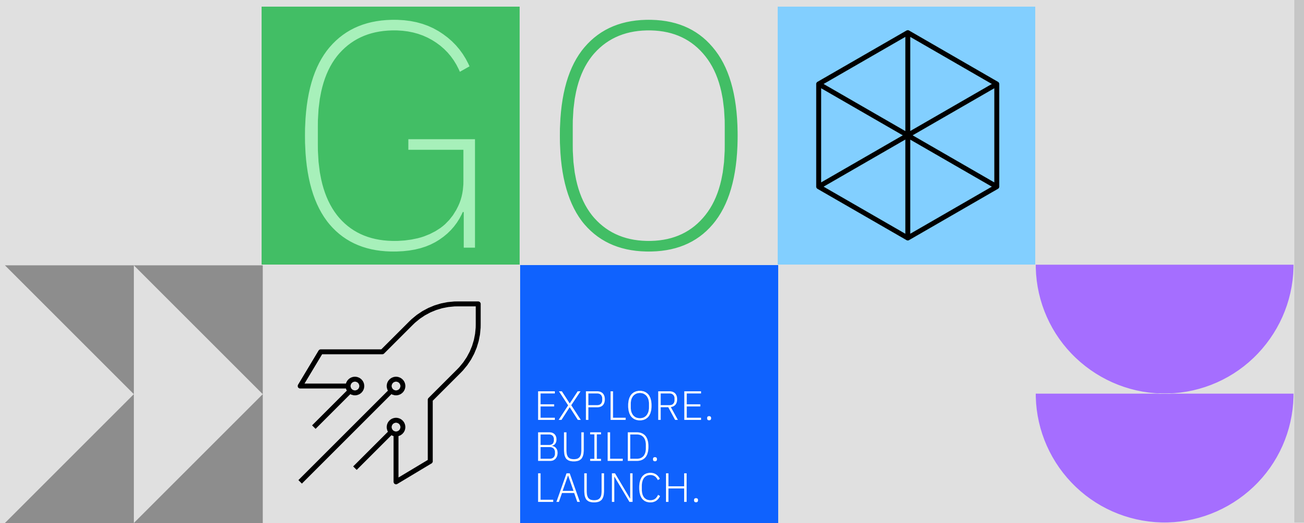
Full Blog Post:

`distillabs.ai/blog`

Schedule a demo to see private AI in action on IBM Power

Thank you

The Future of Enterprise AI is Here



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