

Data & Knowledge Graph Engineer

AI / Higher Education POC



Full-Stack AI + Education Expert | Seiichi Tanaka

- 5AI Orchestration
- 15+ MCP Integrations
- 30yr STEM Teaching
- Neo4j + GraphRAG
- \$55/hr

\$322.7B

AI in Ed Market 2030

Only 27

Neo4j Freelancers on Upwork

2.75x

KG+LLM Accuracy Boost

65%+

EdTech Failure Rate

Why Seiichi Tanaka?

The only candidate who is both educator AND engineer

EDU

30 Years of STEM Education

Deep understanding of how students learn, cognitive load theory, and curriculum design. Educational knowledge graphs require domain-specific entity relationships that pure engineers cannot model correctly.

5AI

5AI Orchestration System

Unified Claude + Gemini + ChatGPT + Grok + Manus workflow. Research shows multi-agent LLM systems achieve 140x accuracy improvement over single-agent approaches (arXiv 2511.15755).

MCP

15+ MCP Server Integrations

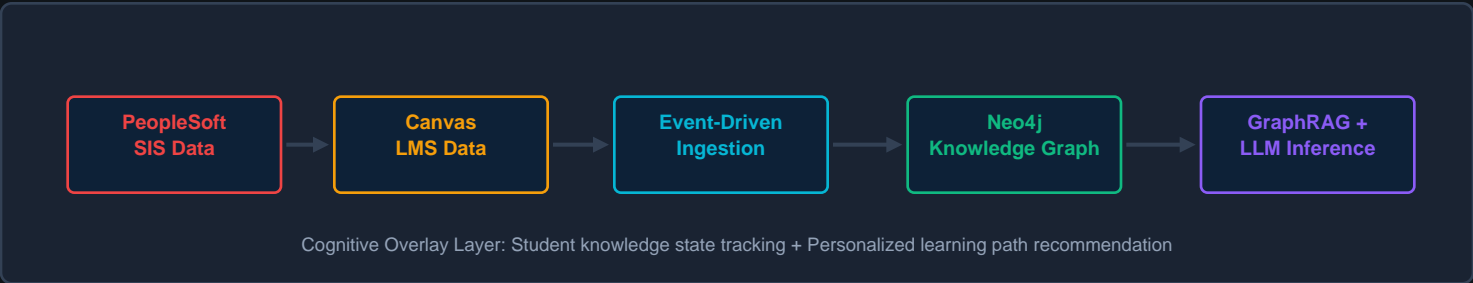
Production-grade Model Context Protocol ecosystem. Neo4j MCP server enables AI agents to interact with knowledge graphs via Cypher queries. Standardized protocol for connecting all education data sources.

COG

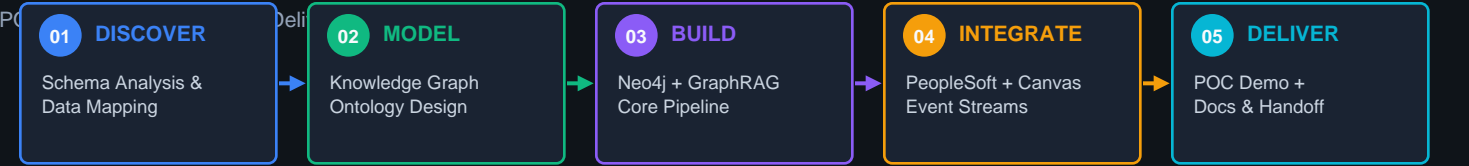
Cognitive Overlay Layer Design

Personalized learning path recommendation through student cognitive state mapping. Graph-based Cognitive Diagnosis Models track student-skill-question interactions on heterogeneous cognitive graphs.

System Architecture



Development Plan & Delivery



Milestone Delivery Plan

Milestone	Deliverables	Timeline	Rate
M1: Schema & Graph Model	PeopleSoft/Canvas schema analysis, Neo4j ontology design, data pipeline prototype	Week 1-2	\$55/hr
M2: GraphRAG Pipeline	Knowledge graph population, GraphRAG indexing, vector store integration, Cypher queries	Week 2-3	\$55/hr
M3: Inference Layer	LLM inference layer, cognitive overlay prototype, student success prediction model	Week 3-4	\$55/hr
M4: Integration & Demo	Event-driven PeopleSoft/Canvas sync, end-to-end testing, documentation, POC demo	Week 4-6	\$55/hr

Key Features Included

GraphRAG Microsoft's graph-enhanced retrieval system	Real-time Sync Event-driven PeopleSoft to Canvas pipeline	Neo4j KG Production knowledge graph with Cypher	LLM Inference Multi-model AI reasoning layer	Vector Store Embedding-based semantic search	MCP Protocol Standardized AI-data connection layer
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Proven Track Record

Project	Technology	Result
5AI Orchestration System	Claude, Gemini, GPT, Grok, Manus	Multi-AI unified workflow
Bybit Trading Platform	Python, API, WebSocket	Live trading automation
MCP Server Integrations	15+ servers, TypeScript, Python	Production MCP ecosystem
STEM Education Platform	React, Vite, PWA (20 apps/week)	K-12 to university level
Pine Script Trading Suite	TradingView, Smart Money Concepts	Multi-instrument analysis

\$55/hr

HOURLY RATE

4-6 Weeks

TIMELINE

ASAP

READY TO START

Let's build an AI-first education platform that actually understands how students learn.