

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



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 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).



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.



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

PeopleSoft
SIS Data

Canvas
LMS Data

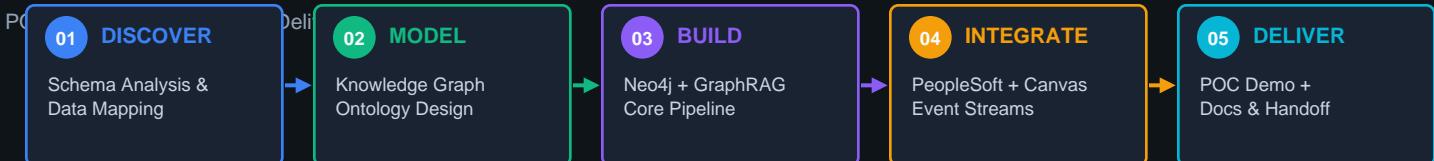
Event-Driven
Ingestion

Neo4j
Knowledge Graph

GraphRAG +
LLM Inference

Cognitive Overlay Layer: Student knowledge state tracking + Personalized learning path recommendation

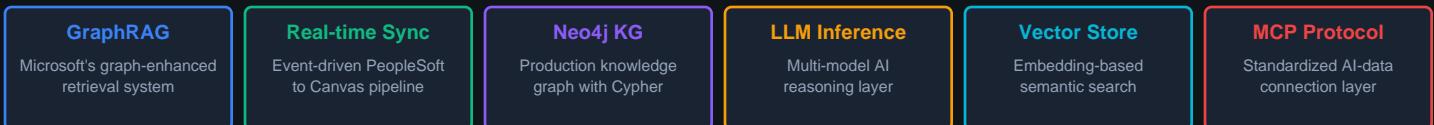
Development Plan & Delivery



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



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.