



# OlympianPT

***Adaptive Physical Therapy Board-Exam  
Mastery for Everyone***

- ✓ *Excel in strengths*
- ✓ *Overcome weaknesses*
- ✓ *Reach the Olympian-PT Podeum* 



# Problem

- **Static finite question banks** quickly become outdated
- **No personalized remediation or adaptive support**
- **Schools lack actionable data** to support entire cohorts
- Prep providers face **high student churn** and costly manual content updates
- **Demand for physical therapists** outpaces supply
- Competition for **top clinical talent** is rising



OlympianPT



Inspired by Olympic athletes' relentless spirit to rise after each fall, and personal rehab experiences:

» **OlympianPT motivates** PT candidates to persevere and achieve their peak potential so they can help others heal, move, and enjoy life to the fullest!

*This 🤘 is our mission!*

# Our Solution

**OlympianPT**

- ✓ AI-powered adaptive learning app
- ✓ Empowering PT candidates to master their boards
- ✓ Personalized dynamic practice, tailored to each student's unique needs.

# Market Opportunity

- ~20,000 PT students graduate per year in the U.S.
- ~226 accredited DPT programs
  - large institutional market
- ~88% first-time NPTE pass rate
  - clear room for improvement and strong school incentives
- Expansion potential: other boards in US
  - Occupational Therapy (OT): ~9,000 graduates/yr
  - E.g.: Accounting (CPA exam): ~72,000 candidates/yr
  - Law (bar exam): ~35,000 graduates/yr
  - Several health boards
- Large continuing education market for practicing professionals

# Competitive Advantage

- Traditional prep: Finite static question banks, limited updates

🏅 OlympianPT: Adaptive, on-demand question generation with no content ceiling

- Traditional: One-size-fits-all study paths

🏅 OlympianPT: Personalized mastery paths per student or cohort

- Traditional: Limited or no data insights in current models

🏅 OlympianPT: Actionable, detailed analytics for schools and providers

- Static branding in competitors

🏅 OlympianPT: Aspirational "Olympian" narrative to drive engagement and retention

# Implementation Plan

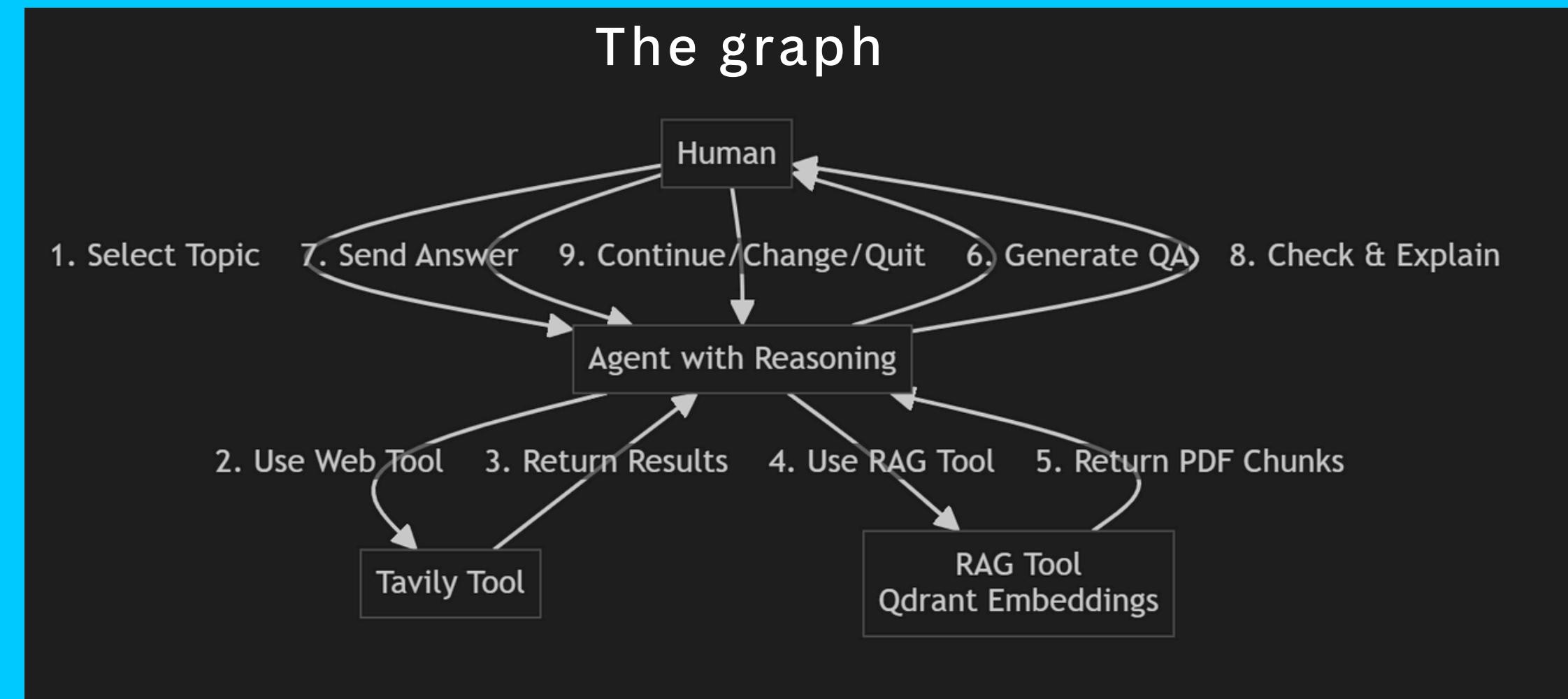
## 1<sup>st</sup> Stage: MVP

- **GraphRAG** with Qdrant integration
- **Agentic retrieval** of material from reputable sources
- **RAG** Multiple Choice Qs & answer generation
- **Human-in-the-loop** for improvements on the fly
- **RAGAS** evaluation built-in system with Cohere reranker

## 2<sup>nd</sup> Stage, future additions

- Synthetic MCQ generations from University partners' curated knowledge sources
- Modular strengths/weakness mapping
- Diagnostics, continuous tracking
- Learning management systems (LMS) for integration with partners' platforms.
- Application Security
- Human-in-the-loop for SMEs
- Built-in-feedback mechanism from users

# Implementation





# Development

1. **LLM** – [Claude Opus 4](#) for customers: state-of-the-art performance on complex, agent workflows, delivering superior reasoning accuracy – Initially using Ollama Qwen3
2. **Embedding Model** – [text-embedding-3-small](#). Launched January 25 2024, it boosts retrieval benchmarks - Initially using Qwen3 embedding model
3. **Orchestration** – [LangChain/LangGraph](#) Supports loops, branching & persistence for managing stateful LLM pipelines
4. **Vector Database** – [Qdrant](#): ultra-fast indexing, high throughput, low latency for scalable vector similarity search
5. **Monitoring** – [LangSmith](#): Unified testing and observability for LLM applications yield actionable evaluation and error-tracking insights
6. **Evaluation** – [RAGAS](#): Reference-free metrics to assess both retrieval and generation quality in RAG systems, accelerating evaluation cycles
7. **User Interface** – [ReAct](#): Component-based architecture and virtual Document Object Model (DOM) enable reusable UI components for building interactive, maintainable front ends



# Data & Resources

1. Papers (PDF) – Google Scholar, ArXiv, NIH, 40 papers
2. NPTE sources, MCQA samples
3. Federation of State Boards of Physical Therapy (FSBPT)  
guidelines for NPTE
4. Web general Physical Therapy sources, educational  
material, Wikipedia, most recent advances, etc.



# User Interface

**Start NPTE MCQ Demo**

Please select one of the 9 NPTE topics

Select a topic... Get MCQ

Cardiovascular and pulmonary systems  
Musculoskeletal system  
Neuromuscular and nervous systems  
Integumentary system  
Metabolic and endocrine systems  
Gastrointestinal system  
Genitourinary system  
Lymphatic system  
System interactions

**NPTE MCQ Demo**

Please select one of the 9 NPTE topics

Select a topic... Get MCQ

A patient presents with chest pain, shortness of breath, and palpitations. What is the PRIMARY assessment priority in this patient evaluation?

A. Perform ECG  
B. Administer oxygen  
C. Check vital signs  
D. Order chest X-ray

**NPTE MCQ Demo**

Please select one of the 9 NPTE topics

Select a topic... Get MCQ

A patient presents with pain and swelling in their foot. What is the first assessment priority?

A. Order x-ray  
B. Check vital signs  
C. Perform ECG  
D. Administer oxygen