

# LEVL - Longevity Protocols Copilot

## Company Description:

LEVL is an AI-native longevity startup building novel nutraceutical formulations and personalized protocols to help people live longer, healthier lives.

By leveraging AI-native research and product-development tools, LEVL identifies promising combinations of naturally derived ingredients and translates them into products and protocols that target the biology of aging while delivering functional benefits like Energy, Sleep, Focus, and Calm.

Our companion app dynamically optimizes personalized longevity protocols based on users' biomarkers and qualitative feedback, helping them improve their pace of aging over time.

Students will directly contribute to building the intelligence layer behind LEVL's protocol ecosystem: an AI copilot that helps users understand, adapt, and improve their protocols using structured LEVL protocol objects, user context, and a research-grounded Longevity Knowledge Graph. This system will support more personalized, explainable, and actionable protocol guidance in pursuit of LEVL's ultimate mission: Achieve Longevity Escape Velocity, and eliminate age-related disease.

## Preferred Team Size: 4

**Location:** Remote - With virtual access to the team throughout the entire program

## Project Summary

### Objective:

Develop the MVP version of LEVL's Longevity Protocols Copilot, a protocol-aware AI assistant that helps users understand why their protocol works, what to change, and what to try next.

The overall LEVL protocol structure has already been defined. This project focuses on building a conversational and API-driven layer on top of that structure, using the Longevity Knowledge Graph and evidence-backed protocol logic to generate grounded answers, suggested adjustments, and clear rationales.

Users might ask questions like:

"What should I change in my protocol if my sleep is improving but my morning energy is still low?"

"What can I do to improve muscle growth while training fasted?"

"Why is this supplement in my protocol?"

The Copilot should return clear, protocol-aware suggestions personalized to the user's goals, constraints, preferences, and current stack, while showing the reasoning and evidence behind each recommendation.

At its core, this project builds the intelligence and explainability layer for LEVL's protocol platform. Over time, this could evolve into a more advanced coaching interface, adaptive protocol optimization system, and AI guide for protocol onboarding and habit adoption. Those downstream surfaces are out of scope for this project, but the system should be designed so they become easier to build.

## Core Deliverable

### Functional Protocols Copilot v1

#### 1. Protocol-Aware Chat Interface

Ship a secure, LLM-powered chat experience that answers user questions about their existing protocol, tradeoffs, goals, and next steps. The Copilot should understand the user's current stack and respond in a clear, practical way.

#### 2. KG-Grounded Reasoning Layer

Connect the chat system to LEVL's Longevity Knowledge Graph and existing protocol objects so answers are grounded in structured knowledge rather than generic health advice. The system should use protocol, ingredient, pathway, and outcome relationships where relevant.

#### 3. Recommendation + Adjustment Suggestions

Enable the Copilot to suggest evidence-backed protocol changes based on user goals, biomarkers, preferences, and constraints. Output should include ranked suggestions and short rationale, not just free-form chat.

#### 4. Explainability + Citation Layer

Return structured reasoning for recommendations, such as modality or ingredient to pathway to outcome, along with clear citations or evidence references whenever possible. Answers should help users understand not just what to do, but why.

#### 5. Internal Review + QA Workflow

Build a lightweight internal interface for LEVL scientists or reviewers to inspect outputs, review auto-generated claims or recommendations, and flag low-quality responses. This is a trust and iteration layer, not a full admin platform.

## Stretch Goals

- **Action-to-Protocol Hooks:** Let the Copilot add a suggested modality or protocol change into the user's plan with confirmation.

- **Preference Sliders:** Support persistent user controls such as budget, effort tolerance, risk aversion, and evidence rigor.
- **Paced Rollout Logic:** Suggest when to introduce, pause, or retire modalities based on user feedback and adherence over time.

## Scientific Relevance

Most health chatbots offer generic advice. LEVL's opportunity is to build a system that is grounded in structured protocol objects, linked to biological pathways and outcomes, and capable of making explainable recommendations in context. This project helps turn the Longevity Knowledge Graph into a user-facing protocol intelligence layer that can accelerate personalization, improve trust, and generate better feedback loops around what actually works for different users over time.

## Desired Skill Set

This project is ideal for students excited by the intersection of AI, health science, and product design. Helpful skills include Python for data or API work, curiosity about LLM systems and retrieval, comfort building clean interfaces, and interest in grounding AI in structured knowledge. Familiarity with graph databases, RAG, or health-focused apps is a plus, but not required. LEVL is built with AI-native tools and expects students to use modern AI workflows to move quickly and build clean, modular systems.

## Student Benefits

1. Gain hands-on experience building an AI-native product at the intersection of LLMs, health science, and structured knowledge.
2. Ship a user-facing system that helps explain and personalize real longevity protocols, not just a back-end demo.
3. Build a standout portfolio project involving conversational AI, recommendation logic, and explainable health-tech UX.
4. Top-performing students may be invited to continue working with LEVL or be referred to partner startups in the healthtech and AI space.
5. Complimentary LIFESPAN+ products to improve sleep, boost energy, focus, and mitigate the effects of stress.

## Contact Information:

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