# Lumen AI Agentic Companion: Cross-Feature Requirements

## Overview

This document synthesizes the cross-feature and AI requirements for the Lumen agentic companion, based on the NavigationGuideConcept\_Lumen design document and existing app features.

## Core Cross-Feature Requirements

### 1. Navigation & Guidance System

* **Explore Map Integration**
  + Highlight philosophical concept paths and connections
  + Suggest exploration routes based on user interests and history
  + Mark unexplored areas with subtle indicators
  + Guide users along constellation lines and hemispheric pathways
* **Feature Discovery**
  + Introduce new app features contextually when relevant
  + Guide users to underutilized features that match their interests
  + Provide progressive disclosure of advanced features based on user progression
* **Learning Path Optimization**
  + Analyze user interaction patterns to suggest optimal learning sequences
  + Identify knowledge gaps and suggest content to fill them
  + Create personalized philosophical journeys based on user preferences

### 2. Contextual Engagement System

* **Philosophical Prompts**
  + Generate contextually relevant philosophical questions
  + Provide thought-provoking insights related to current content
  + Adapt prompting style based on user engagement patterns
* **Content Enhancement**
  + Suggest related concepts when users engage with philosophical content
  + Provide additional context for complex philosophical ideas
  + Offer different perspectives on philosophical topics being explored
* **Reflection Triggers**
  + Prompt users to reflect on their philosophical journey at appropriate moments
  + Suggest connections between user's past explorations and current content
  + Encourage deeper thinking through Socratic questioning techniques

### 3. Social Connection System

* **Community Integration**
  + Suggest relevant forum discussions based on current exploration
  + Prompt sharing of insights at meaningful moments
  + Highlight community activity related to user's interests
* **Collaborative Learning**
  + Identify opportunities for users to learn from peers
  + Suggest discussion topics based on current philosophical exploration
  + Facilitate philosophical dialogues between users with similar interests
* **Achievement Sharing**
  + Prompt sharing of significant philosophical achievements
  + Generate shareable insights based on user's philosophical journey
  + Create opportunities for meaningful social interaction around philosophical concepts

### 4. Notification & Nudge System

* **Intelligent Notifications**
  + Deliver personalized philosophical prompts via notifications
  + Time notifications based on user engagement patterns
  + Ensure notifications add philosophical value rather than merely driving engagement
* **Contextual Nudges**
  + Provide subtle in-app nudges toward valuable features or content
  + Design nudges to be non-intrusive but visible at appropriate moments
  + Ensure nudges align with user's current philosophical interests
* **Re-engagement Prompts**
  + Generate philosophically meaningful re-engagement prompts for inactive users
  + Create personalized "philosophical questions of the day" to spark curiosity
  + Design notification content that respects user's philosophical interests

### 5. Onboarding & User Flow System

* **Adaptive Onboarding**
  + Personalize onboarding based on user's indicated philosophical interests
  + Progressively introduce features as users demonstrate readiness
  + Provide contextual help during first-time feature usage
* **Flow Optimization**
  + Identify friction points in user journeys and provide assistance
  + Guide users through complex philosophical exploration paths
  + Suggest optimal next steps based on current context and user history
* **Feature Transition**
  + Facilitate smooth transitions between app features (Ask → Explore → Journal → etc.)
  + Maintain context and philosophical continuity across feature boundaries
  + Suggest cross-feature actions that enhance philosophical exploration

### 6. Gamification & Progression System

* **Achievement Recognition**
  + Acknowledge philosophical milestones and achievements
  + Award titles and badges that reflect philosophical growth
  + Provide meaningful feedback on progression
* **Visual Evolution**
  + Evolve Lumen's appearance based on user's philosophical journey
  + Reflect user's philosophical interests in Lumen's visual characteristics
  + Create visual indicators of philosophical mastery and exploration
* **Motivation Enhancement**
  + Identify user's intrinsic motivations and align prompts accordingly
  + Balance challenge and achievement to maintain engagement
  + Create meaningful philosophical goals based on user's interests

## AI Requirements

### 1. Contextual Awareness

* **User History Awareness**
  + Maintain awareness of user's philosophical exploration history
  + Track concepts explored, questions asked, and insights saved
  + Build a philosophical profile of the user over time
* **Current Context Awareness**
  + Understand the user's current location within the app
  + Recognize the philosophical content currently being engaged with
  + Identify the user's current activity and likely goals
* **Philosophical Interest Mapping**
  + Build and maintain a map of user's philosophical interests
  + Identify patterns in user engagement with philosophical topics
  + Detect shifts in philosophical interests over time

### 2. Adaptive Behavior

* **Interaction Frequency**
  + Adapt appearance frequency based on user preferences
  + Recognize when users need guidance vs. independent exploration
  + Adjust intervention frequency based on user feedback
* **Tone Adaptation**
  + Modify communication style based on user preferences
  + Adjust philosophical depth based on user's demonstrated knowledge
  + Personalize language patterns to match user's communication style
* **Learning from Feedback**
  + Incorporate explicit and implicit user feedback
  + Refine recommendations based on user responses
  + Continuously improve personalization through interaction

### 3. Philosophical Intelligence

* **Concept Mapping**
  + Understand relationships between philosophical concepts
  + Identify conceptual connections relevant to user's interests
  + Map user's exploration against the broader philosophical landscape
* **Question Generation**
  + Create philosophically meaningful questions tailored to user context
  + Generate questions that encourage deeper thinking
  + Adapt question complexity based on user's philosophical sophistication
* **Insight Synthesis**
  + Connect disparate philosophical ideas explored by the user
  + Generate novel insights based on user's exploration patterns
  + Identify philosophical themes in user's journey

### 4. Non-Intrusive Design

* **Appropriate Timing**
  + Appear at meaningful moments without disrupting flow
  + Recognize when users are receptive to guidance
  + Avoid interrupting deep engagement or reflection
* **Graceful Presence**
  + Fade in and out smoothly without jarring transitions
  + Maintain subtle presence when potentially useful
  + Respect user's attention and focus
* **User Control**
  + Allow users to easily dismiss or summon Lumen
  + Respect user preferences for interaction frequency
  + Provide settings for customizing Lumen's behavior

### 5. Accessibility Intelligence

* **Adaptive Accessibility**
  + Provide alternative interaction modes for different accessibility needs
  + Ensure screen reader compatibility with meaningful descriptions
  + Adapt visual and interaction patterns based on accessibility settings
* **Inclusive Design**
  + Avoid reliance on any single sensory modality
  + Provide multiple ways to interact with Lumen
  + Ensure philosophical guidance is accessible to all users

## Integration Requirements

### 1. Feature-Specific Integration

#### Ask Feature Integration

* Guide question formulation with contextual suggestions
* Recommend philosophical tones based on question content
* Suggest follow-up questions based on previous responses
* Connect AI responses to relevant concepts in the Explore feature

#### Explore Feature Integration

* Highlight paths on the concept map based on user interests
* Suggest connections between concepts being explored
* Provide context for philosophical concepts
* Guide exploration of concept constellations

#### Quest Feature Integration

* Provide hints for quest progression when users are stuck
* Highlight philosophical connections between quest elements
* Suggest quests based on user's philosophical interests
* Celebrate quest completion with philosophical context

#### Journal Feature Integration

* Suggest reflection prompts based on recent exploration
* Connect journal entries to relevant philosophical concepts
* Recommend journaling topics based on philosophical interests
* Highlight patterns and themes across journal entries

#### Forum Feature Integration

* Suggest relevant discussions based on user's current exploration
* Prompt sharing of insights at meaningful moments
* Recommend community connections based on philosophical interests
* Guide users to discussions that match their philosophical questions

### 2. Technical Integration Points

#### User Profile System

* Access and update philosophical interest profile
* Track progression and achievement data
* Store personalization preferences for Lumen
* Maintain history of interactions and responses

#### Notification System

* Integrate with existing notification infrastructure
* Schedule philosophical prompts and reminders
* Personalize notification content based on user context
* Track notification engagement for optimization

#### Analytics System

* Provide data on Lumen's impact on user engagement
* Track effectiveness of different types of interventions
* Measure impact on retention and feature discovery
* Analyze patterns of user-Lumen interaction

#### Content Management System

* Access philosophical content database
* Retrieve relevant concepts and explanations
* Map relationships between content elements
* Identify content relevant to user's current context

### 3. Visual and UX Integration

#### UI Consistency

* Match app's cosmic and celestial aesthetic
* Incorporate woodgrain and parchment textures
* Use consistent color palette (deep navy, golden yellow, beige-brown)
* Maintain visual harmony with existing UI elements

#### Animation and Interaction

* Implement gentle floating animation with pulsing glow
* Create sparkling effect for appearance and disappearance
* Ensure smooth transitions between states
* Design subtle attention-drawing mechanisms

#### Placement Strategy

* Position near relevant interactive elements without obscuring them
* Maintain consistent presence in navigation contexts
* Appear at appropriate screen locations based on current activity
* Ensure visibility without disrupting content