University of Cyprus

AGENTIC REASONING SCIENTIST

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New Mission Statement

- Revolutionize scientific research with a self-improving AI scientist
- Use adaptive, multi-agent reasoning & continuous learning
- Modular design with specialized agents (idea generation, hypothesis, experiment planning, code execution, benchmarking, review) managed by a top-level Manager Agent with meta-reasoning and reinforcement learning.
- Enable flexible human oversight for expert guidance

Business Model Canvas Highlights

- **Platform:** AI-driven discovery via multi-agent reinforcement learning
- **Partners & Activities:** Collaborations with academia, tech providers, regulators, and industry; focus onR&D, integration, and compliance
- **Value & Outcome:** Faster discovery, rigorous insights, cost efficiency, and a scalable AI solution

Mission Statement Changes

From Literature Review:

- Shift to a decentralized, multi-agent system
- Embrace continuous improvement via reinforcement learning
- Increase autonomy with adaptable expert oversight
- Transition to dynamic, independently optimizing agents
- Focus on scalable, advanced AI frameworks

BMC Rationale:

- Align mission with an AI-driven, scalable business model
- Support faster, cost-efficient research matching market needs
- Enhance system flexibility to serve diverse research and industry partners
- Optimize value delivery through innovative, adaptive processes

Market Analysis & Beachhead Selection

All markets need fast work and clear results. Each market has its own focus:

- **Academic & Research Institutions (Rank 1)**

  Focus: Speed up research and boost teamwork.

  Pros: Trusted, high impact, mission-aligned, and speeds up research and publishing.

  Cons: Lower economic benefit per user.

- **Private R&D Organizations (Rank 2)**

  Focus: Fast innovation and quick decisions.

  Pros: Easy to reach and fits well with innovative work.

  Cons: Offers less economic benefit than pharma/biotech.

- **Pharma & Biotech Institutions (Rank 3)**

  Focus: Safe, compliant tools to cut R&D time and costs.

  Pros: High economic potential and speeds up drug development**.**

  Cons: Long sales process and strict rules.

- **Government & Public Research Agencies (Rank 4)**

  Focus: Secure systems that meet strict rules.

  Pros: High economic potential and speeds up drug development**.**

  Cons: Slow, bureaucratic process and needs full product integration.

- **Conclusion:**

  Academic & Research Institutions are our best starting point due to their strong research impact and close match with our goals.

End-User Profile Definition

- **Demographics:**
  - Academics (Professors, Researchers, etc.) with advanced degrees
  - Ages 25–65 (31% <45, 39% 45–54, 30% 55+)
  - Global reach (concentrated in North America, Europe, Asia)
  - Moderate salaries + research grants
- **Psychographics:**
  - **Aspirations:** Breakthrough discoveries, top publications, competitive funding
  - **Fears:** Falling behind, inaccuracies, delays
  - **Motivators & Values:** Recognition, innovation, scientific transparency, collaboration
- **Proxy Products & Engagement:**
  - Tools: Research managers (EndNote, Zotero), analysis software (MATLAB, R, Python)
  - **Platforms:** Google Scholar, ResearchGate, academic conferences, online communities
- **Daily Routine & Priorities:**
  - **Day:** Morning research updates, mid-day meetings/literature reviews, afternoon brainstorming
  - **Priorities**: Faster discovery (30%), AI-assisted analysis (25%), data management(20%),collaboration (15%), career/funding (10%)

THANK YOU