



Revolutionizing Skincare Concept Testing with Synthetic Data and GPT-4

CLIENT

A Leading Skincare Brand

INDUSTRY

Retail



BUSINESS CHALLENGE

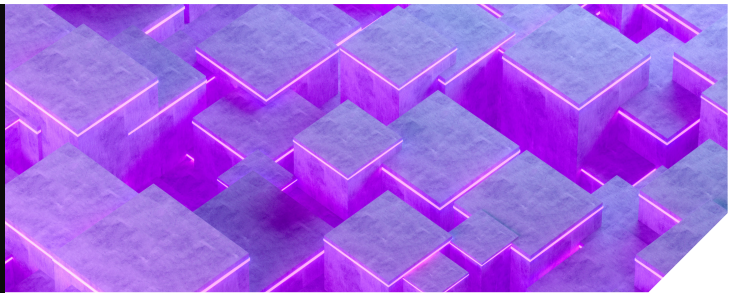
In the competitive beauty industry, a leading skincare brand faced delays and high costs with traditional concept testing methods, and also struggled with panel diversity. To address these issues, the brand reached out to C5i to explore whether we could leverage the power of AI to conduct the concept test without relying on panel providers or spending on sample data. The client wanted an automated, AI-based solution to conduct the early innovation concept test with greater speed and efficiency.

C5i SOLUTION APPROACH



The skincare brand finalized categories for testing, including sunscreen, moisturizer, luxury, and hydration, and determined sample sizes, audience groups, demographics, and key metrics. Leveraging past concept test results, C5i developed a robust AI model using Generative AI (GenAI) and Large Language Models (LLMs) with agent-based Retrieval-Augmented Generation (RAG) systems. This model, trained on market studies, consumer reviews, and demographic data, simulated realistic consumer reactions across diverse markets and segments. The approach aimed to accelerate the concept-to-market process, reduce research costs, and enhance feedback accuracy by generating a wide range of consumer profiles from minimal initial data.

BUSINESS IMPACT



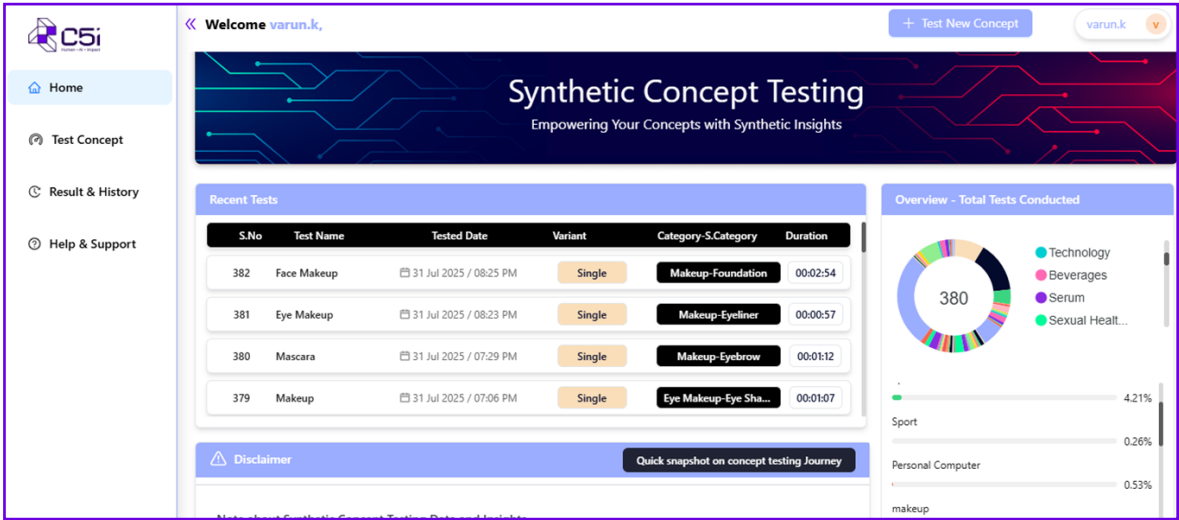
- Accelerated product development and improved product-market fit, strengthening competitive edge
- Provided data for each test concept, meeting sample sizes (250 per concept) and demographics
- Identified winning concepts based on high scores in key metrics such as purchase intention and distinctiveness
- Recommended the winning concept in each category
- Validated accuracy by comparing synthetic data with actual respondent scores and obtained 80% similarity

FUTURE SCOPE

To future-proof the current solution, the following developments are taking place:

- The client is now expanding this solution in other geographies and subcategories
- We, at C5i, are now setting up a full-fledged automated reporting module for the same solution

SNAPSHOTS FROM THE DASHBOARD



Synthetic Concept Testing

Text Concept Visual Concept

Add New Concepts

Test Title*
Sun Protection

Concept Title*
Sun Protection

Product Category*
Skin Care

Product Sub-Category*
Sunscreen Essentials

Write Your Concept*
Emphasizes daily use of broad-spectrum sunscreens to protect the skin from UV damage photoaging and skin cancer. Key components include zinc oxide titanium dioxide and SPF-rated products.

Target Persona

All 100% allocated successfully!

- GenZ (18-28) 20 %
- Young Millennials (29-35) 20 %
- Old Millennials (36-45) 20 %
- GenX (46-60) 20 %
- Boomer (61-79) 20 %

Gender
☒ Female
☒ Male

Ethnicity

Responses 250

Synthetic Concept Testing

+ Test New Concept varun.k

Dashboard Log

Concept Level Summary Demographic Level Summary

Summary Table - Concept Level

Green cells indicate significant differences at a 90% confidence interval across columns, based on MDD value. Green arrow indicates significant differences from average at a 90% confidence interval, based on MDD value.

Total Performance Score (out of 100)	76.28	77.60	77.00
Key Measure Top 2 Box	SPF Sun Protection (A)	Targeted Treatments (B)	Average
Base	250	250	500
Likeability	84%	84%	84%
Relevance	76%	77%	77%
Distinctiveness	74%	78%	76%
Purchase Intent	72%	71%	72%

ABOUT US

C5i is a pure-play AI & Analytics provider that combines the power of human perspective with AI technology to deliver trustworthy intelligence. The company drives value through a comprehensive solution set, integrating multifunctional teams that have technical and business domain expertise with a robust suite of products, solutions, and accelerators tailored for various horizontal and industry-specific use cases. At the core, C5i's focus is to deliver business impact at speed and scale by driving adoption of AI-assisted decision-making.

C5i caters to some of the world's largest enterprises, including many Fortune 500 companies. The company's clients span Technology, Media, and Telecom (TMT), Pharma & Lifesciences, CPG, Retail, Banking, and other sectors. C5i has been recognized by leading industry analysts like Gartner and Forrester for its Analytics and AI capabilities and proprietary AI-based platforms.



www.c5i.ai

