

AI-Powered Market Intelligence & Automation for Wayfair Rugs

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Agent 1: Moodboard Generator

From Design Prompt → AI-Curated Visual Mood

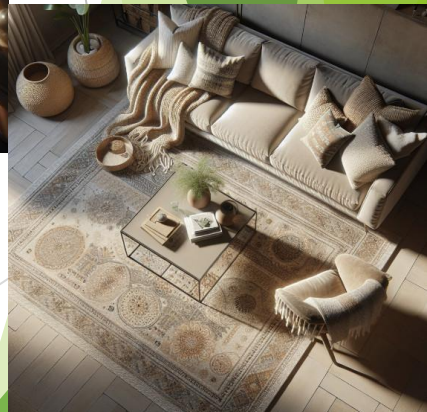
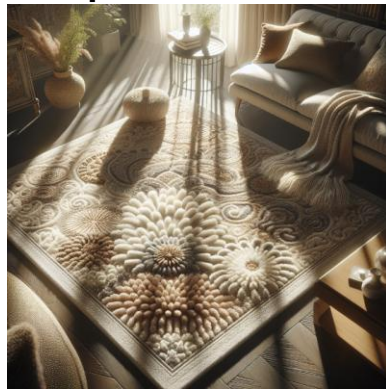
🎯 Objective: Convert short design prompts into AI-generated moodboards to help the team explore emerging rug styles, color palettes, and visual directions.

🧠 Input Example: “Bohemian rugs, neutral tones”

⚠️ Input Guidelines:

- Keep prompts specific and under 10 words (e.g., “eco-friendly jute rugs”).
- Use clear style and material keywords (color, texture, tone).
- Avoid subjective adjectives like “beautiful” or “nice.”

Output:



Agent 1: Moodboard Generator

View JSON Workflow:

The workflow diagram shows the following steps:

- When chat message received
- AI Agent (sub-process: Chat Model* → OpenAI Chat Model)
- Clean Prompt
- HTTP Request (POST: https://api.openai.com...)
- Extract Image Data
- Convert to File (Move Base64 String to File)

The chat interface shows the following message:

A cozy, stylish, modern, living room, bohemian rug like those sold on Wayfair, soft textures, warm neutral colors, perfect for a living room. Plush and inviting, realistic textile detail, natural lighting, top-down view. High-quality, lifestyle photography style.

[No response. Make sure the last executed node outputs the content to display here]




The logs panel shows the following steps:

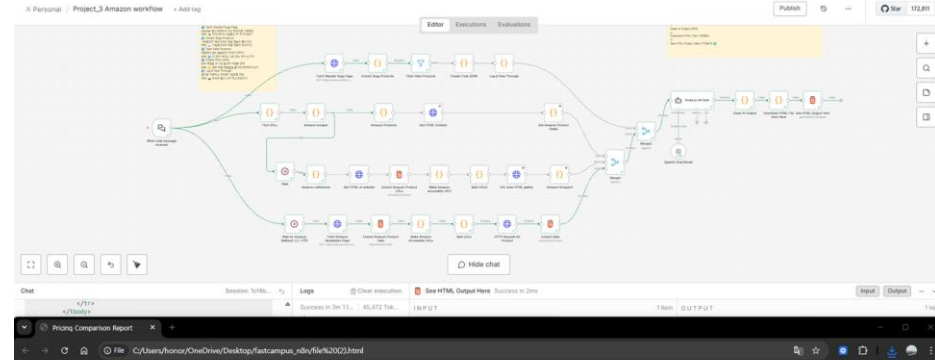
- When chat message received
- AI Agent
- OpenAI Chat Model
- Clean Prompt
- HTTP Request
- Extract Image Data
- Convert to File

The output panel displays a generated moodboard image of a living room with a large sofa, a patterned rug, and a coffee table. A button labeled "Back to list" is visible in the top right corner of the output area.

Agent 2 : Competitor Monitoring and Comparison

Wayfair vs. Amazon Rug Pricing Analysis

-  System Role: Pricing strategist for Wayfair's rug division, focusing on price positioning and competitive strategy.
-  Key Tasks:
 - Compare Wayfair rug prices against Amazon listings.
 - Classify position as Cheaper, Parity, or Premium.
 - Provide one clear pricing action for each identified gap.
-  Output Requirements:
 - Detailed price comparison table (\$ and %).
 - Focus exclusively on pricing data, ignoring secondary metrics.
 - Generated as a complete HTML report.



Wayfair vs Amazon Rug Pricing Comparison

Rug Name	Wayfair Price (\$)	Amazon Price (\$)	Price Difference (\$)	Price Difference (%)	Position	Pricing Action
Black Farmhouse Washable 8x10 Area Rug	93	93	0	0%	Parity	Run 10% promo on Black Farmhouse rugs to gain price advantage.
Washable Navy Blue Living Room Rug	101	101	0	0%	Parity	Run 5% discount promo for a competitive edge.
Bahn Taupe Brown Living Room Rug	101	101	0	0%	Parity	Introduce a loyalty program offering discounts on next purchase.
Oriental 8x10 Large Area Rug	110	110	0	0%	Parity	Promote additional 5% off for purchases over \$100.

✦ Input System message:

"You are a pricing strategist for Wayfair's rug division.

Your ONLY focus: price positioning and competitive pricing.

Task:

1. Compare Wayfair rug prices vs Amazon prices
2. Identify: Is Wayfair cheaper, at parity, or premium?
3. For each price gap, provide ONE clear pricing action

Output Requirements:

- Show price comparison table (Wayfair vs Amazon)
 - Calculate price differences (\$ and %)
 - Classify: Cheaper / Parity / Premium
 - Give specific pricing actions (e.g., "Lower SKU X to \$199", "Run 15% promo on category Y")
- Focus ONLY on pricing. Ignore materials, reviews, or marketing.
Return complete HTML report."

Agent 3: AI-powered marketing content automation

Transforming Data into High-Impact Content

🧠 Input: Amazon product data including pricing, features, and style details.

⚙️ Processing: Data scraping → AI analysis (GPT-4o) → Insight extraction → Content generation.

🚀 Output:


- Trend Insights: Identifying top-performing styles like "Washable Farmhouse Rugs."
- Marketing Assets: Automated blog posts, Instagram captions, and HTML reports.


The screenshot displays a workflow automation interface for a project named "Project4_Amazon_Only_SIMPLE". The workflow consists of the following steps: Chat Trigger, Amazon Scraper, Extract Links, Process URLs, Fetch Products, Extract Data, Combine All, Generate Signals, OpenAI Model, Parse JSON, Generate Content, OpenAI Model 2, Clean HTML, and Download. The interface includes tabs for Editor, Executions, and Evaluations. A chat window at the bottom shows a prompt: "Generate marketing content based on top products!". The logs panel indicates a successful execution. The preview section shows the generated HTML content, which includes a title "Amazon Rug Trends" and a body of text describing the benefits of washable farmhouse rugs.


```
{ "html": "<!DOCTYPE html><html><head><meta charset='UTF-8'><title>Amazon Rug Trends</title></head><body><h1>Washable Rugs</h1><p>Washable rugs are becoming essential in farmhouse style decor, blending practicality with aesthetic charm. - Affordable luxury: Most stylish farmhouse rugs range between $93 to $109, offering great value for money. - Features like non-slip and stain resistance are highly sought-after, enhancing both safety and longevity.</p></body></html>"
```

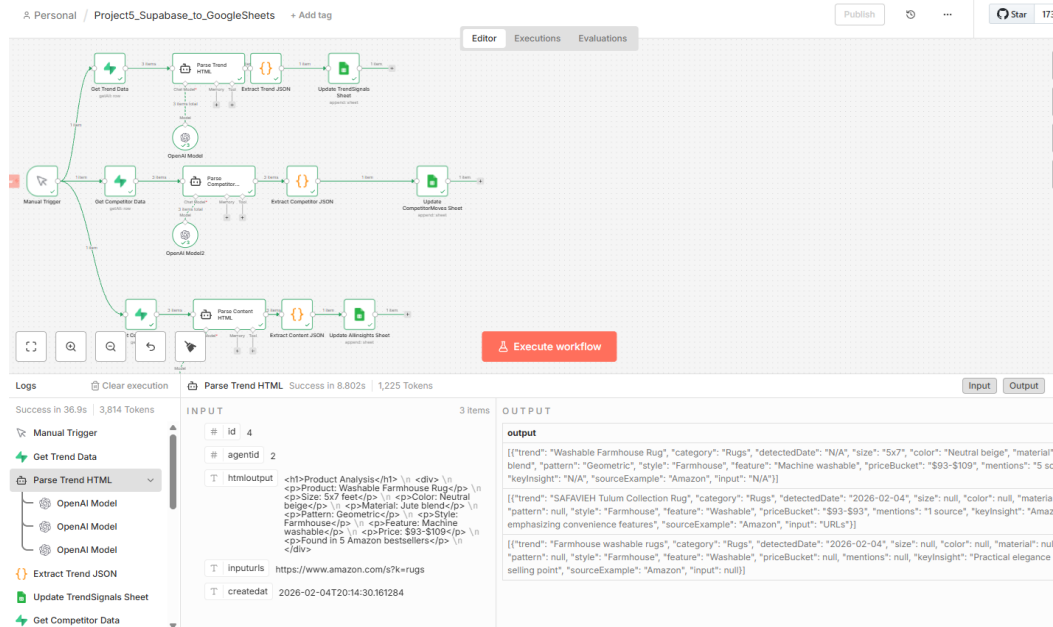
Agent 4: Market Intelligence Orchestrator

Centralized Data Synchronization and Insight Delivery

 Input: Product, pricing, and trend data from scrapers, Google Sheets, and Supabase.

 Processing:
Synchronize data between Google Sheets (control) and Supabase (database).
Enable AI agents to access structured data for pattern analysis.

 Output: AI-produced trend insights, pricing signals, and marketing content delivered to dashboards and system storage.



Market Intelligence Summary

Bringing All Agents Together → Live Insights for Wayfair's Rugs Team

Wayfair Intelligence Dashboard			
Executive Summary - Market Intelligence Report			
Generated: 2026-02-04			
Key Performance Indicators			
Total Trends Identified		Competitor Products Analyzed	Content Ideas Generated
Trend Analysis			
Top Emerging Trend	Washable Farmhouse Rug		
Primary Category	Rugs	Price Range	\$93-\$109
Key Feature	Machine washable	Style	Farmhouse
Material	Jute blend	Market Mentions	5 sources
Competitive Intelligence			
Primary Competitor	Amazon	Product	SAFAVIEH Tulum Collection
Competitor Price	\$93.99	Rating	4.5
Key Features	Soft and durable, Machine washable		
Wayfair Gap Identified	Need washable options under \$100		
Strategic Recommendations			
Immediate Action	Launch washable collection		
Content Strategy	5 Washable Rug Styles		
Content Type	Blog	Impact Level	High
Assigned Owner	Marketing		
Market Insights			
The rug is a popular choice in multiple Amazon bestseller lists, indicating a strong market presence.			
Trend Summary	Emphasizing convenience		
Competitive Insight	Practical elegance		
Content Insight			
Summary Statistics			
High Impact Content Idea	6		
Medium Impact Content Ideas	0		
Blog Post Ideas	6		
Social Media Ideas	0		
Unique Categories	0		
Average Price Point	\$93-\$109		

Reflections & Future Improvements

What I Learned and How I Can Make It Better



Key Learnings

- **Systemic Resilience:** I learned to design "fault-tolerant" logic that pivots to brand pillars when external data fails.
- **Logical Sequencing:** I discovered that the strategic order of data capture, interpretation, and translation is more vital than the tools.
- **Data Convergence:** I learned that true intelligence comes from synthesizing micro-product specs with macro-market signals.



Future Improvements / Next Steps

- **Anti-Blocking Integration:** I will integrate dedicated Scraping Proxy APIs to ensure 100% data uptime against security blocks.
- **Multi-Modal Analysis:** I plan to add visual analysis to match creative copy with the aesthetic "vibe" of trending products.
- **Human-in-the-Loop:** I would implement a feedback node to iteratively refine the agent's understanding of the brand voice.

The background of the slide features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, dynamic feel. A thin, light gray line also runs diagonally across the lower right portion of the image.

Strategic Intelligence for Wayfair Rugs: Ready for the Next Leap!