Build and Evaluate an AI MVP

MVP

An AI Minimum Viable Product is the simplest version of an AI-powered solution that solves a real problem with measurable value

MVP should answer

How much this *cost*

Will it *work*

Will I *trust* it

How much *time* does it take to improve it

What are the key *features* it should have

What is for dinner?

Manual meal planning (time-consuming, mentally exhausting)
Meal kit services ($$$, limited customization)
Random cooking (food waste, repeat meals)

Market Segment	2024 Size	2033 Projection	CAGR	Key Facts
Meal Kits	$6.4-8.6B	$19.4-20.8B	11.8-15.4 %	Germany/UK/France lead; HelloFresh dominates; 25-30% global share
Online Food Delivery	$31.2-63.1 B	$70.0-157.1B	9.3-10.6%	94% EU internet penetration; UK 21-23% share; Deliveroo/Just Eat/Uber Eats
Ready-to-Eat/Prepared	$135.3B	$152.8B+	5.2-6.2%	17% of EU calories; 90% UK adoption; Germany 20%+ market share

Key aspects: Plant-based +40%; Single households +16.9%; Mobile orders 90%; Sustainability focus

What the MVP EXCLUDES ❌ (for now)

- ❌ Breakfast and lunch (dinner only)
- ❌ Detailed cooking instructions (generalities MVP)
- ❌ Nutritional calculations
- ❌ Calorie counting
- ❌ Multiple serving size options (assume 2 servings)
- ❌ Budget constraints
- ❌ Leftover planning
- ❌ Seasonal ingredient awareness
- ❌ User saved preferences/history

What the MVP INCLUDES ✅

✅ 7 unique themed dinners (Monday-Sunday)
✅ 5 ingredients per recipe (excluding basics like salt, pepper, oil, garlic, water)
✅ Dietary preference support (omnivore, vegetarian, vegan, keto)
✅ Consolidated shopping list with quantity totals
✅ Email delivery via Gmail SMTP
✅ LangSmith tracing & monitoring
✅ Pydantic data validation
✅ Dual LLM support (OpenAI & Anthropic)
✅ Custom theme requests (e.g., "Italian, Mexican, Japanese")
✅ Additional preference input (e.g., "no nuts", "extra spicy")
✅ Gradio web interface with public share URL
✅ LangSmith evaluation suite with custom prompts
✅ Hallucination detection (fake ingredients, dietary violations)
✅ Theme uniqueness validation
✅ Shopping list completeness checks
✅ Generation time tracking (30s limit)
✅ Test cases for all 4 dietary preferences
✅ Brief cooking instructions per recipe