

AI-Powered Lead Intelligence & CRM Orchestration System

GoHighLevel + n8n + AI/LLM + REST APIs + Webhooks + JavaScript + Gmail

PORTFOLIO SYSTEM

CRM + AI

PRODUCTION TESTED

Executive Summary

Project 049 extends a working GoHighLevel CRM with an external AI intelligence layer in n8n. Incoming leads are validated, analyzed by an LLM, converted into structured qualification signals, scored with deterministic business rules, and written back into GoHighLevel as visible CRM intelligence. GoHighLevel then resumes control for native opportunity, task, tag, and notification automation. The design intentionally keeps GoHighLevel as the operational system of record while n8n handles the advanced reasoning and orchestration that the CRM does not natively provide.

9	100	3	2
AI intelligence fields written to GHL	point deterministic lead scoring model	native priority routes: Hot / Warm / Cold	end-to-end paths validated: Hot + Warm

Business Challenge A marketing agency receives leads from a GoHighLevel discovery form, but human teams still need to inspect each inquiry, judge fit and urgency, decide who deserves immediate attention, and manually interpret what should happen next. This creates inconsistent qualification, slower response to high-value leads, and limited visibility inside the CRM.	System Objective Create a clean GHL-to-n8n-to-GHL architecture that enriches every valid lead with structured AI intelligence and a rules-based priority, while preserving GHL as the CRM owner for downstream sales execution.
--	---

Solution Architecture

GHL Workflow 01A Form Submitted Send lead to n8n production webhook	n8n Workflow 01B Validate -> AI qualify -> guardrail -> score -> priority -> enrich GHL	GHL Workflow 02 Priority changed -> find opportunity -> Hot / Warm / Cold native routing
--	--	--

CRM Intelligence Written Back to GoHighLevel

AI Intent Level	AI Service Fit	AI Buying Readiness
AI Budget Fit	AI Urgency	AI Summary
AI Recommended Action	AI Lead Score	AI Lead Priority

Key Architectural Decision

GHL manages the CRM; n8n makes the CRM smarter. The project deliberately avoids duplicating GHL with a second CRM or external database. n8n owns normalization, AI reasoning, validation, scoring, and API enrichment. GHL owns contacts, opportunities, tags, tasks, pipeline movement, notifications, and future nurture.

Workflow Design & Technical Implementation

1. Intake & Validation • Receive GHL webhook payload and normalize field names / formats. • Validate required lead fields before any AI call. • Invalid submissions are stopped and sent to a Gmail human-review alert.	2. AI Qualification & Guardrails • OpenAI returns structured intent, service fit, readiness, budget fit, urgency, summary, and recommended action. • Structured output is validated against controlled values. • Invalid AI output is blocked before scoring and routed to an exception email.	3. Deterministic Scoring • JavaScript converts validated AI signals into a 0-100 score. • Priority thresholds: Hot 75-100; Warm 45-74; Cold 0-44. • The LLM interprets the lead; deterministic rules make the final priority decision.	4. GHL CRM Enrichment • REST API updates the existing GHL contact using actual custom field IDs. • Nine AI fields become visible inside the contact record. • Private Integration token uses scoped access instead of a legacy key.
--	---	---	--

Native GHL Priority Routing

HOT	Clean old priority tags -> add ai-hot-lead -> move opportunity to Qualified -> create priority sales task -> send internal hot-lead alert.
WARM	Clean old priority tags -> add ai-warm-lead -> move opportunity to Contacted -> create warm follow-up task.
COLD	Clean old priority tags -> add ai-cold-lead -> keep opportunity open in Contacted -> add lead-nurture tag for long-term follow-up.

Production Test Evidence

Maya Reyes - NorthPeak Fitness Studio	97 / 100 - HOT	AI fields populated in GHL; ai-hot-lead applied; opportunity moved to Qualified; priority task and internal sales alert executed.
Lucas Navarro - HarborPoint Property Services	WARM	Fresh form submission completed the full production chain; GHL execution logs confirmed Warm routing, ai-warm-lead tag, Contacted stage, and follow-up task.

Business Impact • Reduces manual lead triage and prioritization. • Gives sales staff a consistent AI summary and recommended next action inside the CRM. • Escalates high-value leads without replacing GHL native workflows. • Keeps low-priority leads available for nurture instead of prematurely marking them lost. • Adds guardrails so incomplete lead data or malformed AI output cannot silently reach sales automation.	What This Project Proves • Cross-platform GHL + n8n orchestration. • Production webhooks and REST API integration. • Structured AI output with validation. • JavaScript-based deterministic scoring. • CRM custom-field enrichment with actual field IDs. • Native GHL opportunity, tag, task, and notification automation. • Deliberate platform ownership: n8n for intelligence, GHL for CRM execution.
--	--

Portfolio Positioning

Project 049 is a flagship proof that GoHighLevel can be extended with custom AI and backend orchestration without replacing the CRM. The final system demonstrates a realistic division of responsibility: n8n performs intelligence and decision support; GoHighLevel remains the operational CRM for sales execution. This makes the project directly relevant to agencies and SMB teams that already use GHL but need more advanced qualification, prioritization, and automation.

Technology Stack: GoHighLevel | n8n | OpenAI/LLM | REST APIs | Webhooks | JavaScript | Gmail

Project Type: Independent portfolio system / business-process simulation. Results shown are controlled test executions, not client revenue claims.