



**INO AI LAB**

[ AI EDUCATION • COURSE MATERIAL ]

# AI Automation with n8n, Make & Zapier

*No-code AI workflows that ship*

LEVEL	DURATION	LESSONS
<b>Beginner</b>	<b>3.5 hours</b>	<b>8</b>



[ 00 ]

# Table of Contents

---

- LESSON 01 **Choosing Between n8n, Make & Zapier in 2026**
- LESSON 02 **AI Steps Inside Workflows**
- LESSON 03 **Connecting CRM, Email, Calendar, and Data Tools**
- LESSON 04 **Reliability, Monitoring & Cost Control**

INO AI LAB

[ LESSON 01 ]

## Choosing Between n8n, Make & Zapier in 2026

Zapier is the easiest entry: massive app catalog, simple triggers and actions, AI steps built in. Make has a visual flow-graph that handles more complex branching and is half the price at scale. n8n is open-source and self-hostable — the right choice when data sensitivity, custom code requirements, or per-execution cost matter. Most serious teams end up on n8n by year two.

Pick by complexity and volume. Under 1,000 tasks/month with simple flows: Zapier. Under 10,000 with branching logic: Make. Above that, or anything touching regulated data: n8n self-hosted. Don't over-engineer day one — start on the simplest tool and migrate when you hit clear limits, not when a YouTube influencer tells you to.

### // KEY TAKEAWAYS

- › Zapier easy, Make cheaper, n8n self-hostable.
- › Pick by complexity and volume, not hype.
- › Start simple; migrate at real limits.

[ LESSON 02 ]

## AI Steps Inside Workflows

---

Every modern automation platform has native AI steps: 'extract data from email', 'classify support ticket', 'summarize webhook payload', 'generate response'. These wrap OpenAI, Anthropic, and other providers with sensible defaults. For most use cases, the built-in steps are enough. Reach for raw HTTP calls only when you need a feature the wrapper doesn't expose.

Cache aggressively. AI steps are 100x more expensive than other steps, so don't re-call for the same input. Most platforms support per-step caching by input hash; turn it on. Also cap retries (default infinite retry on AI errors burns money fast) and add a circuit breaker that pauses the workflow if AI failure rate exceeds a threshold. These three settings save thousands per month at modest scale.

### // KEY TAKEAWAYS

- › Built-in AI steps cover most cases.
- › Cache by input hash to slash costs.
- › Cap retries and add circuit breakers.

[ LESSON 03 ]

## Connecting CRM, Email, Calendar, and Data Tools

The classic high-ROI workflow: new form submission → enrich with Clearbit/Apollo → AI scores fit → if hot, alert sales in Slack + create CRM record + draft personalized email → if cold, add to nurture sequence. This single workflow has paid for entire automation tooling budgets at hundreds of B2B companies. Build it first.

Data goes both directions. Pull from CRM into AI-powered reports (deal risk, account health), then push insights back as CRM fields. The flywheel: CRM data improves AI output, AI insights improve CRM data quality, better data improves the next AI run. Set up the feedback loop early — it's the difference between a one-off automation and a compounding asset.

### // KEY TAKEAWAYS

- › Lead enrichment + scoring + routing is the #1 ROI flow.
- › Push AI insights back into source systems.
- › Feedback loops compound automation value.

[ LESSON 04 ]

## Reliability, Monitoring & Cost Control

---

Automations that silently fail are worse than no automations. Log every run to a database or observability tool (Mezmo, Datadog, or a simple PostgreSQL table). Set alerts on failure spikes, latency increases, and cost anomalies. Review the log weekly — broken workflows accumulate fast when nobody's watching.

Cost control is the unsexy discipline that separates pros from amateurs. Tag every workflow with an owner and a cost center. Track AI spend per workflow per month. Kill any workflow that costs more than it saves. Many teams discover that 20% of their workflows drive 80% of cost — and half of those aren't worth running. The audit pays for itself the first time you do it.

### // KEY TAKEAWAYS

- › Log every run; review weekly.
- › Tag workflows with owner + cost center.
- › 20/80 rule applies to automation cost too.



[ NEXT ]

# Keep Going

You've completed this course material. The real learning starts when you apply what you've read. Pick one idea from this PDF and run a small experiment this week. Document what worked and what didn't. Share your findings with the community.

Explore more free courses, daily AI tips, and curated tools at:

[innovationailab.com](https://innovationailab.com)

Have feedback or want to suggest a topic? We read every message.

[hello@innovationailab.com](mailto:hello@innovationailab.com)

— Innovation AI Lab Team —

// part of LumiLife Tech