THELAZYCPA GUIDE

AI & Automation 101

A structured starter guide for founders and operators. Each topic is organized with clear headers, practical examples, checklists, common mistakes, and one action step.

Cover letter

Hi — this PDF is designed for fast execution, not theory. Use one topic at a time, apply the action step, and improve your systems weekly.

Prepared by Reza Shahrokhi · TheLazyCPA · 2026-02-19

TOPIC 1

API Keys

WHY IT MATTERS

API keys are the identity layer for machine-to-machine actions. They decide what your app can access and what it cannot.

CORE CONCEPT

Treat API keys like banking credentials. If leaked, they can be abused for cost, spam, or data exposure.

PRACTICAL EXAMPLE

> Your signup endpoint sends confirmation emails via SMTP. SMTP credentials are effectively API keys and must stay server-side only.

Checklist

- Store keys in environment variables
- Scope keys to minimum permissions
- Rotate on schedule or immediately after leakage

Common mistakes

- Committing keys to Git
- Sharing screenshots with visible credentials
- Using production keys in local testing

ACTION STEP

Today: audit all secrets used by TheLazyCPA and confirm none are hardcoded.

TOPIC 2

Terminal Basics

WHY IT MATTERS

Terminal commands give speed, repeatability, and precision for operations work.

CORE CONCEPT

If a task is repeated, script it. Manual click paths are slower and inconsistent.

PRACTICAL EXAMPLE

> Deploying with `npx vercel --prod` is faster and easier to verify than dashboard-only workflows.

Checklist

- Use explicit working directories
- Keep scripts in `/scripts`
- Capture command output for debugging

Common mistakes

- Running commands from the wrong folder
- Ignoring non-zero exit codes
- Executing destructive commands without backups

ACTION STEP

Today: keep a `scripts/` folder for repeatable deploy/test tasks.

TOPIC 3

Environment Variables

WHY IT MATTERS

Configuration changes by environment. Code should not.

CORE CONCEPT

Separate logic from secrets and deployment-specific values.

PRACTICAL EXAMPLE

> Set `SMTP_*` and `FROM_EMAIL` in Vercel production so emails work without touching source code.

Checklist

- Define required envs in docs
- Set for production/preview/development
- Add health checks for missing vars

Common mistakes

- Setting values only in one environment
- Assuming local `.env` exists in production
- No validation on startup

ACTION STEP

Today: keep `/api/health` listing critical config status.

TOPIC 4

Webhooks

WHY IT MATTERS

Webhooks automate event-driven workflows with low latency.

CORE CONCEPT

Instead of polling, subscribe to events and process instantly.

PRACTICAL EXAMPLE

> When a lead signs up, trigger enrichment or CRM sync immediately.

Checklist

- Verify webhook signature
- Use idempotency keys
- Retry transient failures

Common mistakes

- Trusting unsigned requests
- Processing duplicates as new events
- No dead-letter handling

ACTION STEP

Today: enforce signature verification on all inbound webhooks.

TOPIC 5

API Design

WHY IT MATTERS

Good APIs reduce bugs and speed up future integrations.

CORE CONCEPT

Predictable request/response structure is part of product quality.

PRACTICAL EXAMPLE

> `/api/subscribe` should always return structured JSON including success state and delivery status.

Checklist

- Validate inputs
- Return consistent status objects
- Include machine-readable error codes

Common mistakes

- Mixed response formats
- Silent failures
- Vague error messages

ACTION STEP

Today: standardize all endpoints around one response schema.

TOPIC 6

Data Storage for Serverless

WHY IT MATTERS

Serverless runtime disks are often temporary. Durable storage is essential for business data.

CORE CONCEPT

Use external persistence for leads, status, and audit logs.

PRACTICAL EXAMPLE

> Store waiting-list signups in Google Sheets or a database; `/tmp` is not long-term storage.

Checklist

- Pick one source of truth
- Add unique constraints for dedupe
- Track write success/failure

Common mistakes

- Relying on in-memory arrays
- Using temp files as primary DB
- No backup/export plan

ACTION STEP

Today: verify every lead path writes to durable storage.

TOPIC 7

Automation Workflow Structure

WHY IT MATTERS

Reliable automation is architecture, not luck.

CORE CONCEPT

Every flow should follow: Trigger → Validate → Act → Confirm → Log.

PRACTICAL EXAMPLE

> User submits email → validate → save lead → send email → return result + log trace.

Checklist

- Define happy path + failure path
- Add retries for network calls
- Make logs searchable by email/request ID

Common mistakes

- No observability
- One giant function with no boundaries
- No fallback when providers fail

ACTION STEP

Today: map one full flow as a state diagram.

TOPIC 8

Prompting for Practical AI Output

WHY IT MATTERS

Prompt quality determines reliability, especially for customer-facing content.

CORE CONCEPT

Structure prompts with role, context, constraints, and exact output format.

PRACTICAL EXAMPLE

> Ask for a 120-word confirmation email in plain English with one CTA and no hype language.

Checklist

- Provide clear intent
- Set length/tone constraints
- Include expected output format

Common mistakes

- Overly open-ended prompts
- No formatting requirements
- No review step for public output

ACTION STEP

Today: save tested prompt templates in a shared prompt library.

TOPIC 9

Human Approval Gates

WHY IT MATTERS

Approvals protect reputation when automation touches external channels.

CORE CONCEPT

Use automation for speed, human review for judgment.

PRACTICAL EXAMPLE

> Queue X posts and request explicit approve/reject before publishing.

Checklist

- Define approval criteria
- Capture approver + timestamp
- Allow easy reject/revise loops

Common mistakes

- Auto-publishing sensitive content
- No audit trail
- Ambiguous ownership

ACTION STEP

Today: add approval-required tags for all public posting flows.

TOPIC 10

Monitoring & Health

WHY IT MATTERS

You only control what you can observe.

CORE CONCEPT

Health checks should reflect business-critical dependencies, not just server uptime.

PRACTICAL EXAMPLE

> Show SMTP configured status, storage connectivity, and recent error count.

Checklist

- Create a useful `/api/health`
- Alert on failures
- Review logs daily

Common mistakes

- Only monitoring 200 status
- No alert thresholds
- No post-incident notes

ACTION STEP

Today: add one alert for email send failure spikes.

TOPIC 11

Security Fundamentals

WHY IT MATTERS

Small projects are still targets. Security basics are non-optional.

CORE CONCEPT

Apply least privilege, rotate secrets, and log sensitive operations.

PRACTICAL EXAMPLE

> If a token was shared in chat, rotate immediately and invalidate old tokens.

Checklist

- Use separate tokens per service
- Rotate credentials routinely
- Restrict admin access paths

Common mistakes

- Reusing one credential everywhere
- No rotation process
- Leaking secrets in logs

ACTION STEP

Today: rotate any credential exposed outside secure channels.

TOPIC 12

Build → Measure → Improve

WHY IT MATTERS

Operational quality improves with short feedback loops.

CORE CONCEPT

Ship small changes, test in production safely, and iterate from real outcomes.

PRACTICAL EXAMPLE

> Deploy signup fix, run live test submissions, then improve copy/conversion based on data.

Checklist

- Release in small increments
- Track one metric per change
- Keep a concise changelog

Common mistakes

- Large risky releases
- No baseline metric
- No retrospective

ACTION STEP

Today: define one KPI for this guide funnel (e.g., submit→email-open rate).