Marloie T. Menchavez, RChE

Licensed Chemical Engineer · AI Automation and Workflow Builder

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PROFESSIONAL SUMMARY

Licensed Chemical Engineer in the Philippines with nearly two years as a Process Safety Engineer at one of the country's largest petrochemical complexes, running hazard analyses and safety reviews and documenting the reasoning behind each decision. That work built a habit of planning for failure and keeping a record so every decision can be checked later. Now builds workflows in Zapier, n8n and Python, with Claude for the AI steps, that take repetitive work off a team's plate, such as lead routing, contract review, order reconciliation and customer-feedback analysis. Each one follows four safeguards: fixed rules handle everything predictable, AI handles only the truly unclear cases, a person signs off where a mistake would be costly, and every result is saved with its evidence.

AI AUTOMATION PROJECTS

Portfolio projects for fictional businesses, built solo and tested on realistic data. Results are from test runs, not live use.

Lead Qualification System · Zapier, Python, AI by Zapier, Airtable, Slack
Scores and routes inbound leads. The AI reads each lead and quotes its source, and fixed rules decide the score and where the lead goes. Routed all 40 test leads correctly (88% on the first run, then 100% after tuning on the same set) and rejected 3 of 3 attempts to trick the AI.

Dead Lead Reactivation · Zapier, AI by Zapier, Google Sheets, Gmail, Slack
Screens old leads with rules in a spreadsheet (31 of 44 test leads eligible, each exclusion with a visible reason), sends AI-personalized follow-ups in capped weekly batches and hands interested replies to a person in Slack.

Contract Review · n8n, Claude, Airtable, Google Drive, Slack
Rejects incomplete contracts before any AI is used (zero AI cost), then checks clauses against a written playbook and flags risks that only appear when clauses combine. Tested on 3 contracts, including a $186K software agreement with 4 red flags routed to Legal and Finance.

Order Reconciliation · n8n, Python, Claude API, Airtable, Slack
Matches orders, payouts and fulfilment records in three tiers. Rules resolved 43 of 50 test orders (86%) with no AI, AI handled the 7 unclear ones, and every outcome is logged with a plain-language reason. Failed connections retry three times, then alert the team.

Voice of Customer · n8n, Claude API, Airtable, Gmail, Slack
Puts 120 feedback items from 3 sources into one format, sorts them into 8 set themes (111 fit, 9 flagged as new) and caught a packaging-complaint spike (1 mention to 14). Sends an automatic monthly digest with recommended actions.

Tools: Zapier · n8n · Python · Claude (Anthropic API) · Airtable · Google Sheets · Gmail · Slack · Webhooks and APIs

WORK EXPERIENCE

Process Safety Engineer · JG Summit Olefins Corporation (JGSOC) 2023 – 2025
Petrochemical complex Simlong, Batangas City

- **Checked everything before start-up.** Led Pre-Startup Safety Reviews (PSSR) across the Naphtha Cracker, Polyethylene and Polypropylene Plants, Aromatics and Butadiene Extraction Units, and Utilities and Offsite Facilities, confirming every safeguard was in place before highly hazardous chemicals were introduced. Result: zero Tier 1 and 2 Process Safety Events for 2023–2025.
- **Planned for failure.** Facilitated HAZOPs, risk assessments, safety audits and site inspections to find what could go wrong, trace the consequences and set the controls that prevent or reduce each risk, documenting the reasoning behind every decision.
- **Wrote the rules people follow.** Authored, implemented and monitored compliance with ISO policies and procedures for the US OSHA PSM 14 Elements, including Management of Change, Operating Procedures, Process Safety Information and Training.
- **Tracked performance with data.** Analyzed monthly and annual process safety KPIs for all process units to catch non-compliances early, and coordinated daily and weekly with Operations and Maintenance on the fixes.
- **Turned incidents into lasting improvements.** Supported incident investigations with recommended actions and spearheaded JGSOC's adoption of IOGP's Process Safety Fundamentals, so lessons learned were applied across all units.
- **Trained the people who use the process.** Developed process safety training modules and led weekly meetings with frontline teams.

EDUCATION

B.S. Chemical Engineering · Mindanao State University – Iligan Institute of Technology 2018 – 2022
Graduated magna cum laude Tambo, Iligan City

CORE COMPETENCIES

Workflow design and automation · Hazard identification and risk assessment · Root cause analysis · Cross-functional collaboration