Marc Niño Christopher Ocampo

AI Engineer & Researcher | RAG Systems | AI Agents | AWS Certified Solutions Architect

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SUMMARY

AI engineer and researcher, Cum Laude BS Information Technology graduate (University of Batangas, 2026), who builds and runs AI systems in production. Built the Hermes-based operations agent that runs a resort's live booking ledger, Sappy (a multilingual RAG assistant for the SapinSapin AI community) and BetterCalatagan (a hybrid-search civic portal guarded by 275 automated tests), all three published as NYO case studies, and contributes to the open-source Hermes Agent ecosystem. AWS Certified Solutions Architect – Associate and AI Practitioner; Fortinet Certified Associate in Cybersecurity.

PROFESSIONAL EXPERIENCE

Valley O'Ville Family Resort | Calatagan, Batangas *April 2026 – Present*

General Manager & AI Systems Engineer

- Built the resort's AI operations agent, growing it from an n8n + Gemini booking bot (February 2026) into a Hermes agent with **14 specialised skills** (September 2026); staff run bookings, payments, rates, finance questions and guest-message drafts from Telegram against a live ledger of **328 bookings**.
- Moved booking entry onto the agent: **every new booking record since September 2026** is created through it, and **all 50 field corrections** are logged with old value, new value, author and reason.
- Designed preview-first writes that show money before and after and save only on an explicit yes, with 10-minute expiring confirmations, staff-supplied receipt numbers and whole-write rollback; **32 of 32** payment and **313 of 313** charge entries pass automated checks.
- Built a Telegram Mini App (the Book button) on Google Apps Script that runs the same booking code as the chat, so a form and a conversation can never produce different records.
- Added a seasonal pricing engine, a live add-on rate card, a loyalty programme read from the ledger, and daily briefs and health checks.
- Automated hiring by connecting Gmail: the agent collects applications in any format (PDF, Word, photos of paper), checks each fact against the resume, and **scored all 40 applicants** in a Google Sheets tracker.
- Launched a live guest-facing website chatbot and Facebook Page publishing (Meta Graph API) gated by an explicit CONFIRM.
- Moved the agent from a laptop to an always-on Oracle Cloud server (Ubuntu on ARM) in October 2026, checking skills, memory and credentials one by one, with nightly off-server backups and health checks that stay silent unless something needs attention.
- Kept finance answers conservative: cash, revenue and balances are never mixed, every figure is labelled Confirmed, Estimated, Missing or Conflict, and tax and payroll questions are checked against official sources.
- Run daily operations, staffing and guest experience; digitisation helped cut check-in from **12 to 4 minutes**.

Telectronic Systems Inc. (TSI / bedoo) | Metro Manila *January 2026 – April 2026*

Product Developer / IT Intern (486 hours)

- Developed a multi-tenant Condo Management System for a TSI client from stakeholder interviews to deployment: wrote the business requirements and scope charter and presented the proposal to the CEO.
- Built a **21-table** AppSheet and Apps Script back office for billing, service requests and occupancy, plus a mobile-first React / Vercel resident portal with OAuth, magic links and **six-role** access control.
- Automated receipt uploads and payment and balance tracking through Google Drive and Apps Script sync, so residents, unit owners, managers and maintenance staff each see their own live view.
- Prototyped a DragonPay-to-AppSheet-to-Xero payment integration (REST APIs, webhooks), mapped in a data flow diagram, with an Apps Script bridge that marks invoices paid automatically.

AI PROJECTS & OPEN-SOURCE CONTRIBUTIONS

BetterCalatagan – Civic Information Portal & AI Search *October 2026 – Present*

Creator & Lead Maintainer (independent open-source project)

- Built a civic portal for a municipality of 60,420 people: **44 pages**, **25 barangay profiles** and **10 machine-readable datasets** from PSA, DILG and DPWH, including 179 infrastructure projects, 156 disclosure filings and 119 public services.
- Enforced source traceability with **275 Vitest / Zod tests** in CI: any unsourced, future-dated or non-reconciling record fails the build, and **838 of 838** municipal-finance identity checks pass.
- Built its AI assistant on Cloudflare Workers with hybrid retrieval (D1 FTS5 / BM25 + bge-m3 embeddings in Vectorize, reciprocal-rank fusion), a model fallback chain chosen by an evaluation set, and a numeric guard that withholds any figure not found in the sources.
- Recovered **232 documents** from the municipality's defunct website through the Internet Archive into an in-site reader, and built a MapLibre 3D barangay map that falls back to an SVG map without JavaScript.
- Stores no questions or answers; a weekly GitHub Actions job opens a pull request when a source changes.

Sappy – SapinSapin AI Knowledge Assistant *August 2026 – Present*

Creator of Sappy; Front-End Developer, SapinSapin AI public site (open-source volunteer)

- Created Sappy, the community's RAG assistant on Cloudflare Workers and AI Search; one backend answers on the website and in Discord in English, Filipino and Taglish.
- Built and maintain its knowledge pipeline, keeping confirmed facts apart from experimental claims: refresh, generation and validation scripts plus **6 GitHub Actions workflows** (daily refresh, RAG health check, deploy with hashed backup and rollback), with human review before production.
- Designed the Discord community's onboarding (introductions, gated participation, Member role, permissions) and wired its administration into a Hermes workflow through Discord MCP.
- Built parts of the public site and its in-browser speech recognition and text-to-speech demo, with catalogue figures synced from the live Hugging Face organisation at build time.

Clipper – Long Video to Vertical Shorts *October 2026 – Present*

Creator & Maintainer (open source, MIT licence)

- Built a local pipeline that transcribes with Whisper large-v3-turbo, asks an LLM to pick the strongest standalone moments, and renders captioned 1080 x 1920 clips for about **1–2 US cents per video**.
- Added three automatic modes (talks, trailers, gameplay and sports), ranked clips by their first 3 seconds, and framed each shot for phones with a face detector.
- Packaged it for others: one setup script for Windows, macOS and Linux, CI that renders a test clip on Windows and Linux, and a full-history secrets audit.

Hermes Agent Ecosystem – Open-Source Contributions *September 2026*

Contributor

- Found and fixed a privacy leak in the Hermes Discord Rich Presence plugin, validated with **5 new tests** and a **32-combination** output comparison: **merged upstream** (PR #6) and shipped in v1.2.2 with credit; proposed a safer default the maintainer **adopted in v1.2.3**.
- Opened a Hermes core pull request (#124310) so every turn-start hook gets a matching turn-end hook on early exits, with 51 tests passing across 9 files.

RESEARCH

AUXILIARE: Connecting Philippine Founders and Investors *June 2024 – June 2026*

Research & Development Lead; Ocampo, M. N. C. P., Delgado, A. J. M., & Alday, J. Z. P. (2026), undergraduate capstone, University of Batangas

- Led a founder–investor platform from requirements to AWS deployment (Laravel, React, PostgreSQL) with preference-based matching, video pitches, messaging and admin identity verification.
- User acceptance testing scored **3.76 / 4.0** with founders and **3.55 / 4.0** with investors (5 of each, unmoderated).

Senior High School Research, Lipa Adventist Academy *2020 – 2022*

- **Ginger and Oregano Leaf Extracts as an Alternative Cockroach Repellent** (2022, first author, n=20)
- **Anime Exposure and Academic Performance** (2022, first author; descriptive-correlational, n=35)
- **Unaddressed Toxic Filipino Culture** (2021, co-author; qualitative narrative inquiry)

OTHER PROJECTS

- **TrabahoLens** (April 2026): mapped **500+ occupations** to Philippine occupation groups with employment, wage and informality estimates, and scored AI exposure with a Claude API pipeline calibrated for overseas-worker and informal-economy effects, shown as an interactive treemap.
- **ResearchArchive** (March 2026): one search across **250M+ papers** from 4 APIs (arXiv, PubMed, CrossRef, OpenAlex) with parallel queries, DOI deduplication, HTTP 429 backoff and BibTeX / APA / MLA / RIS export.
- **AWS CLF-C02 Reviewer** (November 2025): **400+** practice questions with explanations and a real-time multiplayer mode with leaderboards (React, Firebase).
- **Public APIs** (December 2025 – present): open-source registry of **60+ free public APIs** with a browser testing playground, Cmd+K search and a daily GitHub Actions availability check.
- **PisoLens** (March 2026): **6** browser-only inflation tools built on official PSA CPI data, in English and Filipino.
- **Valley O'Ville Website** (2023 – present): designed and built the resort's official mobile-first website (Next.js, Vercel), its first online presence.
- **Project AQUA** (May 2025, IoT coursework team): ESP32 water-quality prototype reading turbidity, TDS and pH, updating Arduino IoT Cloud every 5 seconds and relaying readings over ESP-NOW.

TECHNICAL SKILLS

AI & LLM: RAG, hybrid retrieval (BM25 + vector), multilingual embeddings, evaluation sets, prompt engineering, LLM routing and fallbacks, AI agents (Hermes), MCP, grounding and guardrails

Programming Languages: Python, TypeScript, JavaScript, SQL, PHP, Arduino C++

Cloud: AWS (EC2, S3, RDS, SES), Cloudflare (Workers, Workers AI, D1, Vectorize, AI Search), Vercel, Oracle Cloud, Firebase

Web & Data: React, Next.js, Astro, Vite, Laravel, Tailwind CSS, PostgreSQL, MySQL, SQLite FTS5

Integrations: REST, webhooks, Telegram Bot API and Mini Apps, Meta Graph API, Gmail, Hugging Face Hub API, n8n, Google Apps Script, AppSheet, Discord

Media, ML & IoT: faster-whisper, OpenCV, ffmpeg, ESP32, Arduino IoT Cloud

Quality & DevOps: Git, GitHub Actions CI, Docker, pytest, Vitest, Zod, regression testing

Methods: Requirements analysis, BRD and scope charters, UML, ER and data flow diagrams, Agile, user acceptance testing, technical documentation; experimental, correlational and qualitative research

Spoken Languages: English (professional working proficiency), Filipino (native)

EDUCATION

University of Batangas | Batangas City *June 2026*
Bachelor of Science in Information Technology | **Cum Laude** | Dean's Lister | GWA 1.54 (1.00 highest)

Relevant coursework: Systems Analysis and Design, Database Management Systems, Software Engineering, Information Assurance & Security, Data Structures & Algorithms, Technopreneurship

Lipa Adventist Academy | Lipa City, Batangas *2016 – 2022*
Secondary Education (Grades 7–12) | STEM track | **High Honors**

CERTIFICATIONS

- **AWS Certified Solutions Architect – Associate** (SAA-C03), July 2026, valid to July 2029
- **AWS Certified AI Practitioner** (AIF-C01), June 2026, valid to June 2029
- **AWS Certified Cloud Practitioner** (CLF-C02), December 2025
- **Fortinet Certified Associate in Cybersecurity**, May 2026; Fortinet Certified Fundamentals in Cybersecurity, February 2026; FortiGate 7.6 Operator, May 2026; NSE 1 and 2 (February 2026) and NSE 3 (May 2026)
- **CompTIA IT Fundamentals+ (ITF+)**, May 2025 | **GitHub Foundations**, January 2025, valid to January 2028

- **AWS training:** AWS Academy Graduate – Cloud Architecting (60 hours, September 2025) and Cloud Foundations (May 2025); AWS Cloud Quest: Cloud Practitioner (October 2025); Fundamentals of Machine Learning and Artificial Intelligence (December 2025)
- **Anthropic (May 2026):** AI Fluency: Framework & Foundations; AI Fluency: AI Capabilities & Limitations; Claude 101
- **Fortinet courses (February 2026):** Introduction to the Threat Landscape 3.0; Technical Introduction to Cybersecurity 3.0
- **Cisco Networking Academy:** Cyber Threat Management and Linux Unhatched (July 2025); Creating Compelling Reports (July 2024)
- **Google (Coursera):** Google AI Essentials (July 2025); Foundations: Data, Data, Everywhere; Ask Questions to Make Data-Driven Decisions; Crash Course on Python; Foundations of Project Management (July 2024); Introduction to Relational Database and SQL, Coursera Project Network (June 2024)
- **IBM SkillsBuild:** Artificial Intelligence Fundamentals, Cybersecurity Fundamentals and Explore Emerging Tech (December 2022); Working in a Digital World: Professional Skills (July 2023)
- Verified on Credly (credly.com/users/marc-nino-christopher-ocampo)

ACHIEVEMENTS & RECOGNITION

- Featured in **three NYO case studies** (VOV Agent, Sappy, BetterCalatagan), 2026
- **Best Capstone Project** and **Best Capstone Presenter**, UB College of Information and Communications Technology, 2026; 2nd Best Research Paper and 2nd Best Research Poster, UBIAN LEGACY 2026
- **Best in Mock Interview**, OJT Preparation, UB College of Information and Communications Technology (2026)
- **TOPCIT Level 1 Passer**, 12th TOPCIT Examination, June 2025
- Competed in the Hack the Future Hackathon (2025 Philippine Innovation Conference, November 2025), the IT Quiz Bee (2025 National IT Skills Competition, March 2025) and the Regional Philippine Startup Challenge (2024 CALABARZON Regional Skills Competition, October 2024)

SELECTED WRITING

- *The Lock Was Set to 004*: a weak private key and what to check in your own systems, October 2026
- *You Don't Have to Pay to Start, Because Open Models Are Better Than You Think*, October 2026
- *I Built My First Agent to Fix Our Broken Data*, October 2026
- *What Building Auxiliare Together Taught Me*: product discovery and team leadership, October 2026
- *How I Passed the AWS Cloud Practitioner Exam in 2 Weeks*, December 2025
- *Deploying to AWS: From Local to Cloud*, September 2025

TRAININGS & SEMINARS

From Campus to Company and Winning Your First Job, University of Batangas (June 2026); PCS MMM-TechTalks: Cybersecurity, AI & Technopreneurship, Philippine Computer Society (May 2026); 2025 Philippine Innovation Conference, Batangas City (November 2025); Future Forward: AI, Security & Web 3, UBBC (November 2025); Blockchain: Transforming the Digital Landscape and Trending Fields in IT, Baguio City (October 2025); How to Review Literature & Identify Research Gaps, The Wise Researcher Academy (August 2025); SPARK: Digital Knowledge & Technical Training, DICT Region IV-A (June 2025); UBIAN Conference (August 2024); Campus DevCon, University of Batangas – Lipa (April 2024); BLOCKSMITH and PANDORA blockchain and security seminars, University of Batangas (December 2023 – January 2024); Udemy: Public Speaking Mastery (July 2024) and Creative Writing and Teaching Diploma (June 2023).

PROFESSIONAL AFFILIATIONS & COMMUNITIES

- **NYO** (llm.nyolab.ai), Contributor: platform testing, product feedback, internal code and UI/UX work, 2026
- Member, 2026: **Philippine Computer Society (PCS)**; **Analytics & Artificial Intelligence Association of the Philippines (AAP)**; **Devs100** developer community
- **GitHub Developer Program**, Member; **Google Developer Groups**, Community Member
- Member: **Brahman Integrated Computing Society** (2022 – 2026); **Integrated Society of Information Technology Enthusiasts (iSITE) Inc.** (2024 – 2025)