REGEE CASANA

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SUMMARY

Software engineer and technical lead who designs, architects, and builds production systems, from enterprise Zendesk integrations and cloud services to IoT platforms. Currently lead an eight-person engineering team while staying hands-on, taking products from concept through deployment. Adaptable across stacks and domains, with experience in customer experience, healthcare, government, and disaster risk reduction, and focused on delivering reliable, secure, and maintainable software.

WORK EXPERIENCE

Concentrix

Quezon City, Metro Manila

Technical Lead, Software Engineering — July 2026 – Present

Software Developer — August 2025 – July 2026

- Lead a team of 8, myself plus 7 software developers, owning architecture decisions, code quality, and technical mentorship for the Concentrix TPS Philippines team.
- Spearheading a new product initiative for Concentrix TPS Manila, driving conceptualization, architecture, and hands-on engineering from the ground up (currently in the conceptualization phase).
- Architected a productized Zendesk connector for a translation platform with an internal Romania-based team: OAuth 2.0/Azure AD B2C and real-time WebSocket/SignalR translation for 100+ agents across 20+ languages.
- Shipped 10+ private Zendesk apps to production for multiple enterprise clients, including document generation (PDF/Word receipts and verification slips), verification workflows, and signature capture.
- Built integration-as-a-service for an overseas banking client: a Render-hosted middleware that converts TikTok direct messages into Zendesk tickets via Sunshine Conversations, and an IVR automation that updates the client's IVR throughout the day, including agent skills, languages, and related settings.
- Built a serverless AWS Lambda service for a global client's insurance policy verification, integrating multiple insurer APIs via OAuth2 with encrypted credential management (AWS Parameter Store) and GDPR-compliant, multi-insurer architecture.
- Built a Python CLI migration tool for a local client, moving 10,000+ historical tickets and custom fields from Excel to Zendesk with zero data loss, cutting migration time by 80%.

Kloudtech Corporation

Balanga City, Bataan

Software Engineer

Software Engineering Intern — October 2023 – June 2024

- Own KloudTrack, the company's flagship real-time IoT weather platform for DRRM offices in the Philippines, end to end: architecture, device firmware integration, backend, frontend, cloud infrastructure, deployment, and ongoing upgrades.
- Led the platform through two major versions, from a Coolify-managed VPS to production-grade AWS (EC2, Docker, GitHub Actions CI/CD), mentoring 4 developers and sustaining 8+ months of continuous operation at 99.9% uptime with zero-downtime deployments and automated migrations.
- Re-architected V1 into an enterprise-grade V2: ESP32 firmware, MQTT over TLS, Socket.IO, and AWS IoT Core, S3, EC2, and IAM, with X.509 certificate-based device authentication and checksum-validated OTA firmware updates.
- Engineered high-performance backend services: a custom LRU cache (90%+ hit rate), an MQTT telemetry pipeline (<100ms latency, custom message queue), and WebSockets for 100+ concurrent users with real-time presence.
- Built the React 19 frontend (TanStack Query/Router/Form/Table, Tailwind CSS 4, Radix UI, Mapbox GL) with a 24-hour weather timeline animation for a multi-tenant SaaS spanning 25+ weather stations and 4 station types.
- Resolved critical V1 security and performance issues (CORS misconfiguration, SQL injection risk, N+1 queries) and added JWT with refresh tokens and multi-tier rate limiting, cutting runtime errors by 70%.

Selected Projects

University of the Philippines – Diliman, Institute of Civil Engineering
Quezon City, Metro Manila

Full Stack Developer

- Architected a geospatial Decision Support System (Next.js 14, FastAPI, PostGIS) computing Water Footprint Assessments for 41 subbasins and 25 barangays, translating a research team's Excel methodology into a validated engine (±2% accuracy).
- Designed a dual-geography compute pipeline with PostGIS area-weighted apportionment, versioned/immutable runs for scenario comparison, and an MCDA recommendation engine ranking interventions against water-quality hotspots.
- Implemented role-based auth (admin/researcher/LGU-planner), a generated OpenAPI TypeScript client for end-to-end type safety, and automated PDF/report generation with map and chart exports.
- Set up CI/CD with path-filtered GitHub Actions, per-PR ephemeral database branching (Neon), and a pytest suite covering the compute engine, authorization, and MCDA ranking logic.
- Designed and built the public UP-ICE Wiser Cities website, including project/research profiles and interactive data displays.

Akosi.Music (NFC Music Cards Platform)

Software Engineer & Architect

- Architecting a web platform for physical NFC music cards that unlock an artist's catalog or a single release exclusively for the card's registered owner, from concept to launch plan.
- Designed ownership-bound playback using NTAG 424 DNA chips with Secure Dynamic Messaging, so a single NFC link works on both iOS and Android without a native app.
- Replaced public video hosting with access-controlled streaming via signed URLs (S3/CloudFront), and defined the stack (Next.js, Node/Fastify, PostgreSQL/Prisma), data model, and two card types (artist vs. release).
- Delivered the full architecture package: system diagrams, client pitch deck, page inventory, and a phased timeline.

RevEarth (GHG Emissions Tracking)
Balanga City, Bataan

Full-Stack Developer

- Built and deployed a carbon footprint tracking platform for Philippine organizations on Next.js 15, React 19, TypeScript, Prisma, and Supabase PostgreSQL, hosted on Vercel, with 21 API endpoints and 13 data models.
- Engineered an emissions calculation engine for Scope 1, 2, and 3 using EPA, IPCC AR5, and Philippine DOE 2024 emission factors, with automated PDF/Excel reports and Recharts breakdowns by scope, category, and period.
- Secured the app with Better-Auth (OAuth 2.0, email verification), rate limiting, and security headers.

EDUCATION

Bataan Peninsula State University – Main Campus
Balanga City, Bataan

B.S. Computer Science, Major in Software Development (Cum Laude, GPA 3.63)
September 2024

SKILLS

- **Languages:** JavaScript/TypeScript, Java, C#, C/C++, Python, PHP, SQL
- **Frameworks:** React, Vue, Nuxt, Next.js, Node.js, Express, .NET, Flask, Fiber
- **Databases:** PostgreSQL, Supabase, MySQL, MongoDB, Prisma ORM
- **Backend/Data:** FastAPI, GeoPandas, Shapely, Rasterio, pyproj, Alembic, PostGIS
- **Frontend:** MapLibre GL JS, Apache ECharts, shadcn/ui
- **Infrastructure:** AWS (S3, IoT Core, EC2, Lambda, DynamoDB, API Gateway, Parameter Store, IAM), Neon, Railway, Cloudflare R2, Bun/Turborepo, Docker, Coolify, GitHub Actions, Vercel, Firebase, MQTT, WebSocket, Serverless Framework
- **Other:** Zendesk, NiCE Cognigy, OAuth 2.0, Azure AD B2C, Domain-Driven Design, Figma, Mermaid.js

CERTIFICATIONS

- NiCE Cognigy: Cognigy Specialist (2026)
- Microsoft: Associate Office Specialist – PowerPoint, Word, Excel (2024)
- Cisco: Cyber Threat Management (2024)
- Pearson: IT Specialist – Network Security (2024), Cybersecurity (2023)