Rio Espinosa

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SKILLS

Programming Languages & Frameworks: Python, JavaScript, TypeScript, Java, Node.js, Express.js, React, Next.js, FastAPI, Django
AI & Machine Learning: TensorFlow, Scikit-learn, Large Language Models (LLMs), Prompt Engineering, Model Fine-Tuning, NLP, AI Integration, RAG, AI Agents, Claude Code, Open Code, Pi Dev, Harness, Skill, MCP, ChatGPT, OpenAI
Data Science & Analytics: Power BI, Data Visualization, Data Cleaning, Predictive Modeling, Statistical Analysis, Data Processing
Web & Software Engineering: Full-Stack Development, SaaS Development & Architecture, RESTful API Development, Multi-Tenant Systems, Responsive Web Design, System Design, Agile/Scrum
Databases & Infrastructure: PostgreSQL, MySQL, MongoDB, Redis, Database Design, API Integration, Docker, CI/CD, Cloud Deployment
Development Tools & Automation: Git, GitHub, Linux, Workflow Automation, Web Scraping, Browser Automation, Third-Party API Integration

PROJECTS

AI Classification Model: ProMorph Skin Lesion Classification Model — Python, Tensorflow, ML, Keras, Scikit
- Developed binary skin lesion classifier using morphological preprocessing with TensorFlow and Keras, achieving 0.8029 and 0.8988 AUC across 2 datasets for early non-invasive skin cancer detection
- Published and presented research at the International Conference on Innovation in Artificial Intelligence in Japan (ACM: https://dl.acm.org/doi/10.1145/3655497.3655510)

Guise: Private Antidetect Automation Browser Manager — Tauri, Rust, Next.js, Typescript, FastAPI, Python, SQLite, Playwright
- Developed local antidetect privacy first workspace giving each account isolated browser storage, pinned stable fingerprint and dedicated proxy, eliminating per-profile SaaS fees at $0 infra cost.
- Implemented dual Firefox and Chrome engine with unique fingerprints and headers matching human devices.
- Built record-once automation with pause and play plus cross-profile cookie sharing to carry auth state without repeated logins.

Job Matching, Post Scraper + Application Pipeline — Python, FastAPI, Next.js, Typescript, Treg, Jev, Supabase, Playwright, Docker
- Developed end-to-end job intelligence pipeline polling live boards every 15 minutes via Treg, normalizing and deduping listings and scoring fit 0–100 with typed AI judgments across HIGH/REVIEW/LOW confidence lanes.
- Built one-click tailored application drafting from full job description plus resume context, with Discord alerts for top matches and live SSE progress streamed to the dashboard.
- Hardened the backend with server-only keys, RLS with no anon access, 24h idempotency keys, and a per-call cost ledger with spend-vs-budget dashboard capping runs at $1 by default.

JuanScan: ID Parser using Google ML Kit for Android — Android, Kotlin, Google ML Kit, Python, FastAPI
- An Android application reducing the manual process of writing IDs from 45 seconds down to only 10 seconds with full logging features and preprocessing.

X Affiliate Analytics Dashboard — Python, OpenAI, Grok, Openclaw, Openrouter, AI, Javascript, NextJS, Express, NodeJS
- Built analytics dashboard with competitor analysis, post suggestions and topic tracking connected to a main account, consolidating influencer workflows into a single view.

WORK EXPERIENCE

Lead Developer, Speranza Innovations – Texas, USA **Dec 2025 – Mar 2026**
- Built and launched multi-tenant construction communication SaaS serving 2+ companies statewide, improving operational efficiency by 25–40% and cutting communication turnaround time by 30–50%.
- Led end-to-end product engineering across backend, frontend, system architecture and UI/UX, delivering the platform from zero to production in 3-4 months with 10+ core features for reporting, collaboration and workflow automation.
- Architected Google Cloud Pub/Sub plus catch-all email ingestion pipeline with filtering and routing logic, automating 100+ inbound messages per week and reducing a 10-minute manual process to 1 minute.

Software Developer, Lightweight Solutions – Quezon City, Commonwealth **Aug 2025 – Nov 2025**
- Developed full-stack donation platform for a major local charity with Stripe, Paynamics and PayPal subscriptions, cutting checkout completion from 3-5 minutes to 1-2 minutes.
- Integrated OpenAI LLM powered chatbot to automate donor support responses and reduce overhead costs
- Developed AI-driven SaaS platform enabling users to create and manage custom AI assistants with autonomous troubleshooting and minimal manual intervention.

Data Science Intern, Arthaland Corporation – Taguig, BGC **Feb 2024 – May 2024**
- Built data integration tool merging SAP legacy datasets into MySQL, automating manual processing and saving 8+ manhours per week with 87.5% reduction in daily manual time.
- Built Power BI dashboards for investor and stakeholder reporting on business focus areas.

Software Developer, MinTech – Netherlands **Nov 2022 – Aug 2023**
- Developed and deployed Python trading bot with real-time statistical dashboards serving 100+ active members, cutting trade insight delay by 0.5–5 seconds.

EDUCATION

University of Santo Tomas - *Manila, Philippines* **2020-2024**
B.S. Computer Science specializing in Data Science; Consistent Dean's Lister, Cum Laude