

# Joshua Dave Oropilla

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[github.com/yippiehaayaa](https://github.com/yippiehaayaa) | [linkedin.com/in/joshua-dave-oropilla](https://linkedin.com/in/joshua-dave-oropilla) | Philippines | Open to remote, hybrid & international

## PROFESSIONAL SUMMARY

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Software engineer with 3+ years of experience shipping production-grade applications to 20,000+ users across mission-critical institutional workflows. Works end to end across full-stack web development, RESTful API and microservices design, real-time WebSocket systems, data-integration pipelines, and AI/LLM features built on retrieval-augmented generation (RAG). Currently leads a web-scraping engineering team and is an ACM-published researcher (CIIS 2023, Tokyo). Based in the Philippines and open to remote, hybrid, and international opportunities.

## WORK EXPERIENCE

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### Lead AI Engineer — *Confidential*

March 2026 – Present

- Lead the engineering team building a real-time “drop checker” that monitors ticket availability across major ticketing platforms (Ticketmaster, AXS, SeatGeek, Vivid Seats, StubHub).
- Own the architecture for a system engineered to be among the fastest and most accurate inventory-detection tools on the market.
- Built large-scale distributed proxy infrastructure and anti-bot techniques to reliably access heavily protected platforms at scale.
- Set technical direction, drive engineering decisions, and mentor the team as lead developer.

### Programmer — *University of Baguio*

March 2024 – February 2026

- Designed and shipped full-stack institutional web applications from architecture through production, serving a 20,000+ student and staff population across mission-critical workflows.
- Built RESTful APIs and backend services with Node.js and Express.js over MongoDB and PostgreSQL, applying schema design, indexing, and query optimization for performance at scale.
- Engineered a real-time graduation management system handling 500–2,000 students per ceremony with WebSocket-driven event processing, replacing a fully manual paper-based process.
- Built a legacy-system integration layer that ingests, cleanses, and normalizes data from an unmodifiable upstream system into a unified schema with a cache-first strategy — the backbone of a centralized student information platform with a clean, documented REST API.
- Delivered a full Human Resources Information System (HRIS): administrative dashboard, automated email notifications, performance-evaluation workflows, and a centralized document repository.
- Integrated the Google Workspace API to automate account provisioning and directory management for new students and employees, eliminating manual onboarding.
- Developed React and Next.js frontends for administrative and student-facing applications with a clean, scalable component architecture.
- Deployed containerized applications with Docker on Microsoft Azure using automated CI/CD pipelines via GitHub Actions.

### Freelance Software Engineer — *Self-employed*

June 2023 – February 2024

- Built and deployed an AI-powered legal case digest web application for law students, integrating the Claude API with a retrieval-augmented generation (RAG) pipeline to summarize complex legal documents — offered free of charge.
- Deployed on Azure Kubernetes Service (AKS Automatic) with automated node provisioning and pay-per-second compute to minimize hosting costs for a free-to-use platform.
- Managed end-to-end cloud delivery independently with Docker and version-controlled pipelines in an async-first workflow.

## SKILLS

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**Languages:** TypeScript, JavaScript (ES6+), Python, Go, C#, HTML5, CSS

**Frontend:** React, Next.js, Astro, Tailwind CSS, shadcn/ui, TanStack Query, WordPress

**Backend:** Node.js, Express, RESTful APIs, Microservices, Monorepo (TurboRepo), WebSockets, Server-Side Rendering (SSR)

**AI & Machine Learning:** Large Language Models (LLMs), Claude API, Retrieval-Augmented Generation (RAG), LangChain, OpenCV, AI-assisted development (Claude Code, GitHub Copilot, Cursor, Codex)

**Databases:** PostgreSQL, MongoDB, Redis, SQL, NoSQL, schema design, query optimization

**DevOps & Cloud:** Docker, Kubernetes, GitHub Actions, CI/CD, Microsoft Azure (AKS), Google Cloud, Cloudflare, Linux, containerization

**Infrastructure & Automation:** Proxmox, MikroTik, distributed proxy infrastructure, Playwright, web scraping, anti-bot techniques

**Workflow & Collaboration:** Git, GitHub, Agile, Scrum, code reviews, technical documentation, async-first communication

## EDUCATION

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**Bachelor of Science in Computer Science** — Mapúa University

2018 – 2023

## RESEARCH & PUBLICATIONS

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### **Distance Estimation of Vehicles using Triangle Similarity and Feature Extraction**

ACM CIIS 2023 — 6th International Conference on Computational Intelligence and Intelligent Systems, Tokyo, Japan ·

[doi.org/10.1145/3638209.3638216](https://doi.org/10.1145/3638209.3638216)

- Co-authored peer-reviewed research on monocular camera-based vehicle distance estimation for autonomous driving and traffic monitoring using YOLOv5 and OpenCV, presented at an international ACM conference.