

# Kenneth V. Domingo

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## Work Experience

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### Software Engineer

*Thinking Machines Data Science*

*Taguig City, PH*

*Jan 2023 – Oct 2024*

- Led a cross-functional team of 7 engineers to architect and develop the UNICEF [Giga DataOps Platform](#) [🔗](#), a fully [open-source](#) [🔗](#) master data management platform built in coordination with [Giga](#) [🔗](#), a UNICEF-ITU joint initiative whose mission is to connect all schools to the internet by 2030. V1.0 of the Platform was launched in September 2024 and was presented at the [Open Source Summit](#) [🔗](#) in Vienna later that month. At launch, the Platform managed data for over 2.1M school records across 141 countries, with near-real-time connectivity data for 93k schools updating every few minutes. The Platform was also being leveraged by 2 downstream applications with 5k monthly users.
- Developed a data analytics platform for a foreign agricultural company: optimized the data lake setup for near-realtime updates of logistic movements and validation of the delivery of burnt produce. Daily tasks involved orchestration and scheduling of ELT tasks and SQL queries via Dagster, and automating replication of hybrid cloud deployment environments via Terraform.
- Developed [GenAI applications](#) [🔗](#) for several enterprise clients in the financial sector, leveraging Azure OpenAI. Daily tasks involved designing responsive chat interfaces, and image processing to remove non-text elements in financial documents in order to prepare them for vector embedding for use in downstream RAG applications.
- Developed the [SDG Impact Tool](#) [🔗](#) for [Gold Standard](#) [🔗](#) to digitize their process of reporting, validating, verifying, and tracking the contribution of project activities to the UN Sustainable Development Goals. Daily tasks involved backend development in Django, frontend development in React, and automating infrastructure provisioning across multiple Google Cloud deployment environments using Terraform.
- Developed an internal geospatial analytics platform for a local telecommunications company: involved in migrating user interface components to a modern tech stack and increasing test coverage.

### Software Developer (Freelance)

*Stevn Books*

*Remote*

*Nov 2022 – Jan 2023*

- Developed the API and infrastructure for an inventory management and profit calculator system deployed on DigitalOcean: integrated with PayMongo to process customer payments and AWS Cognito as a B2C identity provider.

### Software Engineer

*Demand Science (Cobena Business Analytics and Strategy)*

*Taguig City, PH*

*Nov 2020 – Nov 2022*

- Developed a unified frontend enabling users to experiment with deployed ML models being developed in-house.
- Developed the frontend for an internal data lakehouse platform allowing users to perform queries on access-controlled data, apply filters, save filters, and export their search results.
- Guided the adoption of MLOps principles within the AI/ML team.
- Spearheaded the company-wide adoption of modern frontend tooling using Figma and TypeScript.
- Developed a supply chain performance survey tool for UK-based marketing consultancy [Ideas and Action](#) [🔗](#): led backend development with Django, Redis, and PostgreSQL, deployed to an AWS environment.
- Developed Gateway, a B2B SaaS geospatial analytics platform: led weekly code reviews to maintain quality standards and optimize the team's delivery.
- Developed internal tooling for an FMCG client: initiated the migration from manual testing to automated API testing using Python scripts, reducing testing time from 2 days to 30 minutes.

### Backend Developer (Volunteer)

*DetectPH*

*Quezon City, PH*

*Mar 2020 – May 2020*

- Developed the API for a COVID-19 contact-tracing mobile application written with Express and MongoDB.

### Bioinformatics Intern

*Philippine Genome Center*

*Quezon City, PH*

*Jan 2020 – Feb 2020*

- Underwent training in bioinformatics; developed a command-line tool and web application for designing

primers for site-directed mutagenesis.

## Certifications

**Azure AI Engineer Associate**

May 2024

- [Microsoft](#) 

**Professional Cloud Architect**

July 2021

- [Google Cloud](#) 

## Education

**University of the Philippines-Diliman**

Aug 2015 – July 2020

*B.S. in Applied Physics (Major in Instrumentation)*


- **Thesis:** Compressive sensing: Applications from 1-D to  $N$ -D

## Publications

**Compressively sampled speech: How good is the recovery?**

Sept 2020


K. V. Domingo, M. N. Soriano

Proceedings of the Samahang Pisika ng Pilipinas 38 [SPP-2020-4C-04](#) 

**Frequency domain reconstruction of stochastically sampled signals based on compressive sensing**

May 2019

K. V. Domingo, M. N. Soriano

Proceedings of the Samahang Pisika ng Pilipinas 37 [SPP-2019-PB-38](#) 

## Projects

**Banyuhay**

[Banyuhay](#) 

- Developed a geospatial web app to allow users to locate nearby restrooms with bidets.
- **Tools Used:** Python, FastAPI, TypeScript, SvelteKit, OpenStreetMaps

**Giga DataOps Platform**

[Giga Sync](#) 

- An open-source master data management platform developed with Giga, a UNICEF x ITU initiative to connect all schools around the world to the internet by 2030.
- **Tools Used:** Python, FastAPI, TypeScript, React, Dagster, Docker, Azure Kubernetes Service, Helm, Azure DevOps, Apache Spark, Apache Superset, Delta Lake, Datahub, Azure Data Lake Storage Gen2, Trino, Apache Hive Metastore, Carbon Design System, TailwindCSS, PostgreSQL, Redis, Prometheus, Grafana, Sentry

**KenGPT**

[KenGPT](#) 

- Yet another ChatGPT clone.
- **Tools Used:** TypeScript, React, Next.js, OpenAI, TailwindCSS

**LSFM**

[LSFM](#) 

- A clone of the LE SSERAFIM Digital Souvenir system.
- **Tools Used:** TypeScript, React, TailwindCSS, Shadcn UI, WebAssembly, ffmpeg

**Chaeobot**

[Chaeobot](#) 

- A Discord bot that keeps track of upcoming K-pop releases, and crossposts Twitter and VLIVE media to K-pop-oriented Discord guilds.
- **Tools Used:** Python, Flask, Discord.py, JavaScript, React, Twitter API, Material UI, PostgreSQL

**PrimerDriver**

[PrimerDriver](#) 

- CLI and web application for automation of the design of mutagenic PCR primers for site-directed mutagenesis.
- **Tools Used:** Python, Flask, JavaScript, React, BioPython, Click, Sphinx, Material Design Bootstrap

## Technologies

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**Backend:** Python (Django, FastAPI, Flask), Go (Fiber), Node.js (Express, Hono)

**Frontend:** TypeScript (React, Next.js, Svelte), Static (Astro, HTML, CSS)

**Databases:** Relational (PostgreSQL, SQLite), NoSQL (Redis, Firestore, MongoDB)

**Cloud Platforms:** Google Cloud Platform, AWS, Azure, Vercel, Firebase

**DevSecOps:** Git, Docker, Kubernetes, Helm, Snyk, Ansible, ArgoCD, GitHub, GitHub Actions, GitHub Advanced Security, Azure DevOps

**DataOps:** Dagster, Google BigQuery, Apache Spark

**Visualization & Dashboarding:** Apache Superset, Metabase

**Infrastructure:** Linux, Terraform, OpenTofu, Prometheus, Grafana