EDUCATION



**San Pablo Colleges** · Magna Cum LaudeHermanos Belen Street, San Pablo City

Bachelor of Science in Computer Science September 2022 - June 2025

INTERESTS AND TECHNOLOGIES



**Interests: Data Science**, **Full Stack Development**, **DevOps**, **Testing, Cybersecurity**

**Technologies: Python**, **TypeScript**, R, Java, **PHP**, Dart, C#, Bash, Arduino, **React**, **Next.js**, Nest.js, Flask,

**FastAPI**, **Laravel**, Streamlit, Flutter, JavaFX, **TailwindCSS**, **ShadcnUI**, NextUI,

**PostgreSQL**, MySQL, Supabase, PocketBase, InfluxDB, **HashiCorp Vault**, **Pandas**,

**Seaborn**, Plotly, ggplot2, **Scikit-learn**, **Jupyter**, **PydanticAI**, **Robot Framework**, Grafana

K6, **Docker**, **Jenkins**, **N8N**, Vapi, BrowserStack, **OpenAPI**, Grafana, Grafana Loki, **Git**,

Linux, Ubuntu, Zorin OS, **Tmux**, **Neovim**, VSCodium, Photoshop, InDesign, Premiere Pro

WORK EXPERIENCE



**Senior Associate Software Quality Engineer** PDAX Inc, March 2025 - Present

* Built scalable automation frameworks for **backend and mobile** **testing** using **Robot Framework, Appium, BrowserStack, Jenkins, and Hashicorp Vault** with both **CI and on-demand pipelines**.
* Designed and implemented a **performance testing ecosystem** with **Grafana K6, InfluxDB, Grafana, and Loki**, enabling real-time monitoring, reporting, and scalable load testing.
* Established a centralized QE infrastructure leveraging **Docker, Nginx, Jenkins, Vault, Grafana, Grafana Loki, and InfluxDB** to streamline test execution, reporting, and team collaboration.

**Software Quality Engineer Intern** PDAX Inc, February - March 2025

* Developed a **CI/CD PoC** for **hybrid test automation** using **Git,** **Jenkins, Robot Framework**, and **Docker**, integrating **SonarQube** for **static code analysis**, automating smoke tests on pull requests, full tests on staging-to-master merges, and deployments to staging and production.
* Built a **CI pipeline for test repositories**, requiring QA input for test selection on feature-to-develop PRs, test selection on develop PRs with QA lead approval, and enforcing full test execution for master PRs.
* Made a PoC of **re-architected backend test automation monorepo**, implementing **HashiCorp Vault** for **centralized secrets management**, optimizing the CI pipeline, and improving maintainability with modular coding abstractions. Streamlined test automation workflows using **Docker, Python, UV, Robot Framework,** and **Robot Framework Requests** to enhance efficiency, scalability, and security.

**Machine Learning Engineer & Backend Developer** Freelance, September - December 2024

* Collaborated with a masteral student to develop a **document evaluation system** using **Natural Language Processing (NLP)** to assess legal documents for project proposals.
* Designed a pipeline to tokenize and embed document text, extract the most relevant sentences for each question using **cosine similarity**, and validate responses through **Natural Language Inference (NLI)**.
* Built the backend infrastructure using **Flask**, **Flask-RESTX**, and **Docker**, deployed via **Gunicorn**, and documented APIs with **OpenAPI/Swagger**.
* Conducted exploratory data analysis and prototyping using **Jupyter Notebook** to refine the NLP pipeline.

**Flutter & React Developer**  Freelance, June - December 2024

* Developed a **kiosk application** using **Flutter/Dart** featuring a virtual tour functionality integrated via a web view. Built the accompanying **web application** for the virtual tour using **React** and **TypeScript**, incorporating **Pannellum** for 360° panorama views, and designed the UI with **ShadcnUI** and **TailwindCSS**.

PROMINENT PROJECTS



**Anonalyze: An AI and NLP-Enhanced Platform for Sentiment and Insight Extraction** 2024

* **Project repository: https://github.com/hyoaru/anonalyze**
* Designed and implemented a **supervised machine learning model** using **Pandas**, **NumPy**, **Scikit-Learn**, and **Jupyter Notebook** with a **Multinomial Naive Bayes** classifier. The model predicts the **sentiment** and **emotion** of sentences using an emotion dataset from Kaggle.
* Developed an **API** for the model using **Flask**, **Flask-RESTX**, **Gunicorn**, **Docker**, and documented it using **OpenAPI/Swagger**.
* Built the core **backend API** using **PHP Laravel** and **OpenAPI/Swagger** for robust data handling and scalability.
* Developed a **web client** using **TypeScript**, **React**, **TanStack Router**, **TanStack Query**, **TailwindCSS**, and **ShadcnUI** for a dynamic, responsive user interface.
* Designed the platform to enable **executives** to post questions and allow their **subjects** to respond. The platform predicts the **sentiment** and **emotion** of the responses, extracts **key concepts**, and generates **keywords** and **keyphrases**.
* Incorporated a **summarization feature** using a **Large Language Model (LLM)** from OpenAI to generate summaries of the entire thread.

**Beyond Decor: A Portfolio and Inquiry Website System** 2023

* **Project repository: https://github.com/hyoaru/beyond-decor**
* Developed a **portfolio and inquiry website system** for **Beyond Decor**, a party and entertainment service, using **ReactJS**, **Next.js**, **DaisyUI**, **TailwindCSS**, and **PocketBase**.
* This project served as an eye-opener to the **composability design principle** in **React** and deepened my understanding of **Next.js** philosophies for building optimized, scalable web applications.
* The website showcases **Beyond Decor’s services**, allowing users to explore party and entertainment options, inquire about services, and get in touch with the company.

**Philippine Poverty Area Estimates Choropleth** 2023

* **Project repository: https://github.com/hyoaru/philippine-poverty-area-estimates-choropleth**
* Developed a **web application** providing a visual representation of the estimated magnitude of poor families in the Philippines using a **choropleth map**.
* The map visualizes data from the years **2006**, **2009**, **2012**, and **2015** to give users insights into the poverty distribution across regions.
* **Data source:** United Nations Office for the Coordination of Humanitarian Affairs (**UN OHCA**) and **Philippine Statistics Authority (PSA)**.
* The project was built using **Python**, **Jupyter Notebook**, **NumPy**, **Pandas**, and **Streamlit**.

**Breast Cancer Classification: Supervised Machine Learning** 2022

* **Project repository: https://github.com/hyoaru/sparta-supervisedml-binary-classification**
* Completed a **peer-reviewed machine learning task** as part of the **Smarter Philippines through Data Analytics R&D, Training and Adoption (SPARTA)** program on the course **Data Science and Machine Learning with Python**.
* Implemented **binary classification** using the **Breast Cancer Wisconsin Diagnostic Dataset**, employing machine learning techniques to predict the presence of cancer based on feature data.
* This project sparked my interest in **machine learning** and helped me discover my passion for the field. As a **first-year scholar** in the SPARTA program, I had the opportunity to collaborate with peers who were already working professionals, which enriched my learning experience and broadened my perspective.

CERTIFICATIONS



**Google Data Analytics Capstone: Complete a Case Study** July 2023 · Google

**Data Analysis with R Programming**  June 2023 · Google

**Share Data Through the Art of Visualization** May 2023 · Google

**Analyze Data to Answer Questions** April 2023 · Google

**Process Data from Dirty to Clean** March 2023 · Google

**Prepare Data for Exploration** January 2023 · Google

**Foundations: Data, Data, Everywhere** December 2022 · Google

**Ask Questions to Make Data-Driven Decisions** November 2022 · Google

**Computing in Python** February 2022 · Development Academy of the Philippines

**Computing Microspecialization Pathway** September 2022 · Development Academy of the Philippines

**Data Science and Machine Learning Using Python** September 2022 ·Development Academy of the Philippines

**Data Visualization Microspecialization Pathway** September 2022 · Development Academy of the Philippines

**Methods and Algorithms Microspecialization Pathway** September 2022 · Development Academy of the Philippines

**Build Python Web Apps with Flask** August 2022 · DICT Philippines

**Analyze Data with Python** July 2022 · DICT Philippines

**Basic Statistics With Python** July 2022 · DICT Philippines

**Experimental Design and Analysis** July 2022 · Development Academy of the Philippines

**Programming for Beginners Using Python** July 2022 · Development Academy of the Philippines

**Programming for Intermediate Users Using Python** July 2022 · DICT Philippines

**Visualize Data with Python** July 2022 · DICT Philippines

**Statistical Analysis and Modeling Using SQL and Python** May 2022 · Development Academy of the Philippines

**Computing in Python** February 2022 · Development Academy of the Philippines

**Data Visualization Using Tableau and Python** February 2022 · Development Academy of the Philippines

**SQL for Business Users** February 2022 · Development Academy of the Philippines

**Storytelling Using Data** December 2021 · Development Academy of the Philippines

**Dashboards and Drill-Down Analytics** September 2021 · Development Academy of the Philippines

**Data Visualization Fundamentals**  September 2021 · Development Academy of the Philippines

**Data Management Fundamentals** March 2021 · Development Academy of the Philippines

**Essential Excel Skills for Data Preparation and Analysis** January 2021 · Development Academy of the Philippines

**Getting Grounded on Analytics** December 2020 · Development Academy of the Philippines