NATHANIEL KINGSLEY PULAN

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EDUCATION

Polytechnic University of the Philippines — Bachelor of Science in Computer Engineering — **Sept 2025**

Specialization in Big Data

EXPERIENCES

Back-End Developer (INTERNSHIP), ROC.PH — **Aug – Oct 2023**

- Developed an extension for student OJT applications, integrating front-end and back-end functionalities.
- Utilized Bootstrap for front-end development to ensure a responsive and user-friendly interface.
- Implemented SQL for database management, ensuring efficient data handling and retrieval.

Front-End Development (TRAINING COURSE), TESDA — **May 2024**

- Enhanced proficiency in HTML, CSS, and JavaScript for web design, focusing on modern techniques and best practices.
- Developed skills in responsive web design, user experience (UX) principles, and interactive web elements using Jscript.

Automation Specialist (INTERNSHIP), OPTOGROW — **Aug – Sept 2024**

- Developed automation solutions to streamline processes using GoHighLevel.
- Ensured and implemented system automation for repetitive tasks, documents, web design.
- Utilized automation tools to optimize workflows.

ACADEMIC PROJECTS

Expense Tracker – Software Development — **June – Aug 2023**

- Develop a full-stack expense tracking application using MERN Stack (MongoDB, Express, ReactJS, Node.js).
- Configured Node.js and Express back end with MongoDB for data storage and developed a dynamic ReactJS front end.

College of Engineering Kiosk – Software Development — **Nov2024 – Feb 2025**

- Developed an interactive digital map kiosk for the College of Engineering to help visitors navigate the campus.
- Designed a user-friendly interface with searchable building and room locations.
- Implemented real-time updates to ensure accurate and accessible navigation information.

Thesis Project – Hardware Development, AI Development, Software Development, Data Analytics — **July 2025**

- Title: Trash Tech: Automated Segregation Solution with Volume & Toxicity Alert System
- Developed a smart waste segregation system using computer vision (Rob flow) to automatically classify waste into biodegradable, non-biodegradable, recyclable, and others.
- Integrated ultrasonic sensors to monitor bin fill levels and an MQ-136 sensor for detecting toxicity.
- Built a real-time monitoring dashboard for data collection and visualization, enabling accurate tracking and reporting.
- Enhanced data processing skills by handling environmental data and organizing datasets for analytics.

ADDITIONAL INFORMATION

Computer Skills: Python, HTML, CSS, JavaScript, PHP, Arduino, MS Office, SQL, Git, Figma, Tableau, GHL, Postman, Jira, Trello.