GABRIEL JERWIN C. BARBACENA

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GitHub: https://github.com/barabz

Information Technology student with growing knowledge of backend and Internet of Things (IoT) development, seeking a software development internship. Experienced in building academic web, mobile, and monitoring systems using React, Flutter, PHP, Firebase, and Supabase. Able to translate business requirements and processes into functional systems, clear workflows, and practical software solutions.

EDUCATION

National University Baliwag **2023 - Present**
Bachelor of Science in Information Technology
(Specialized in Mobile and Web Development)

Technological Institute of the Philippines **2021 - 2023**
Senior High School
Science, Technology, Engineering, and Mathematics (STEM)

SKILLS

Web Development:
HTML, CSS, JavaScript, React

Mobile Development:
Flutter, Dart

Programming Languages:
JavaScript, PHP, Dart, SQL

Backend & APIs:
PHP, Firebase Cloud Functions, Firebase SDK, Supabase SDK, Google Maps API, PayMongo, webhooks

Databases & Cloud:
SQL, PostgreSQL, Firebase, Supabase, Cloudinary

IoT, Tools & Concepts:
ESP32, Arduino, Visual Studio Code, role-based access control, real-time monitoring, API integration

- Business requirements analysis, application workflow development, and practical system design
- Web and mobile feature implementation, debugging, and responsive interface development
- Collaborative project development, communication, and problem-solving
- Adaptability, attention to detail, and willingness to learn new technologies

PROJECTS

Poseidon: Fishpond Monitoring and Management System

Technologies: PHP, JavaScript, Firebase, HTML, CSS

- Developed a web dashboard to monitor fishpond water quality, including pH, dissolved oxygen, and temperature.
- Implemented user account management, worker assignments, fishpond reports, and water-exchange workflows.
- Translated fishpond management requirements into functional monitoring and control processes.

AgriFlow: Irrigation Canal Monitoring System

Technologies: Flutter, Dart, React, JavaScript, Supabase, PostgreSQL, ESP32, Arduino

- Developed mobile applications and a web dashboard for real-time canal water-quality monitoring.
- Implemented role-based access, sensor-to-canal assignments, cleaner task management, and maintenance history.
- Integrated threshold alerts, interactive maps, and location-based weather forecasts to support irrigation decisions.

BiyaheBulacan: Tourism and Travel Planning Platform

Technologies: React, JavaScript, Firebase, Google Maps API, PayMongo, Cloudinary, HTML, CSS

- Collaborated on a platform for discovering tourist destinations, creating itineraries, and sharing travel experiences in Bulacan.
- Integrated destination maps, location selection, navigation, route guidance, checkout, and payment verification.
- Implemented automatic Premium account activation using Firebase Cloud Functions and webhooks.

CERTIFICATIONS

IT Specialist - Cybersecurity

Certiport, a Pearson VUE business

Issued: June 4, 2026 | Expires: June 4, 2031

ACADEMIC RECOGNITION

Dean's Lister - First Year, Terms 1-3

National University Baliwag

Sincerely,



Gabriel Jerwin C. Barbacena