PATRICK MIGUEL BABALA

Software Developer | QA Tester | Web & Mobile App Developer

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Github: github.com/Patpatty19 | Portfolio: portfolio.com

PROFESSIONAL SUMMARY

Software Engineering student with demonstrated expertise in software development and a proven ability to deliver exceptional work in team-based environments. Proficient in building responsive and functional systems using modern frameworks and programming languages such as Java, Flutter, Kotlin, React, and PHP. Combines strong technical proficiency in both web and application development, and information technology. Seeking opportunities to apply technical skills in real-world software development environments.

WORK EXPERIENCE

Information Technology Intern

T2G Network Innovations Inc.   2022

- Gained hands-on experience in enterprise networking infrastructure and website development using the WordPress platform.
- Collaborated with IT professionals to support technical implementations and system improvements.
- Strengthened practical understanding of IT operations, troubleshooting, and cross-functional collaboration.

PROJECTS

Lakbay: Scenic Route & Cultural POI Navigation App

Lead Research Coordinator & Dataset Specialist/Developer | CIIT College of Arts and Technology

- Authored comprehensive undergraduate thesis documentation employing mixed-methods research design integrating quantitative descriptive statistics with qualitative narrative inquiry and thematic analysis to validate multi-criteria ML routing algorithm effectiveness.
- Architected and populated tourism geospatial database across 6 administrative regions (Ilocos, Cagayan Valley, Central Luzon, CALABARZON, CAR, NCR) structured in comma-separated values format, implementing manual data curation with field-level validation for multi-category entities (restaurants, cultural heritage sites, nature parks, museums, scenic viewpoints) ensuring schema consistency and referential integrity.
- Implemented geospatial data standardization protocols with coordinate precision ($\sim$0.11m accuracy), designed normalized metadata schema optimized for spatial query performance, filter operations, and vector map rendering engines supporting real-time polyline visualization and marker clustering algorithms.
- Conducted technical requirements alignment sessions with cross-functional ML engineering team, establishing normalized scoring frameworks for supervised learning model training and centroid-based heuristic waypoint injection supporting multi-criteria decision optimization in experience-weighted route generation.

PayGoal: Flutter Mobile Finance Application

- Architected and implemented responsive UI/UX components using Flutter's widget tree hierarchy, including custom StatefulWidgets for dynamic screen rendering and multi-user functionality with role-based access control.
- Engineered core financial processing logic with real-time balance validation algorithms, transaction state management using Provider pattern, and floating-point arithmetic handlers for precise currency calculations.
- Refactored application architecture by implementing MVVM design pattern, optimizing navigation stack management with named routes, and resolving deep-link routing conflicts for seamless screen transitions.
- Enhanced cross-device compatibility through MediaQuery-based responsive scaling, constraint-based layouts, and resolution-independent UI rendering across multiple Android screen densities.
- Managed distributed version control workflow using Git branching strategies, conducted code reviews for merge conflict resolution, and maintained commit hygiene with semantic versioning.

Software Quality Assurance Testing (Swag Labs Website)

- Executed comprehensive black-box manual testing across production web application (Swag Labs e-commerce platform) utilizing multi-role test scenarios, identifying and documenting 38+ defects with severity classification and visual evidence artifacts.
- Developed complete SDLC test documentation suite including Test Plan, Functional Requirements Checklist, Test Cases, and Defect Log following ISTQB standards and ISO/IEC/IEEE 29119 testing protocols.
- Designed structured Defect Log with detailed bug taxonomy including defect ID, severity level, reproduction steps, environment details, expected vs. actual behavior analysis, and status tracking enabling systematic defect lifecycle management.
- Conducted functional, regression, and UAT testing across authentication workflows, e2e user journeys, UI/UX validation, cross-browser compatibility testing, and workflow bottleneck analysis to identify system failures, security vulnerabilities, and performance degradation issues.
- Generated comprehensive QA metrics report including test execution statistics, defect distribution analysis by severity/module, test coverage percentage, quality improvement recommendations with prioritization matrix, and stakeholder presentation deck with executive summary and actionable insights.

EDUCATION

Bachelor of Science, Major in Software Engineering
CIIT College of Arts and Technology   2022 – Present

Senior High School | TVL Strand-Programming
CIIT Senior High School   2020 – 2022

SKILLS

- Languages & Frameworks: Java, Flutter (Dart), Kotlin, ReactJS, Laravel/PHP, Python, JavaScript, C++, Unity (C#), HTML/CSS
- Tools & Database: SQL, Google Firebase, Google Colab, PowerBI, Microsoft Office, Google Workspace, GitHub

CERTIFICATIONS & AWARDS

- Alibaba Cloud Certification - AI Journey with Alibaba Cloud Seminar
- 2nd Runner-Up, Shark Tank Convention - CIIT College of Arts and Technology
- Nominee, Best Industry-Ready Project - 2nd Inabel Awards
- Project Showcase Representative - CIIT College Open House Event