

Lord Patrick Raizen G. Togonon

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EDUCATION

Primary (2010-2016)

Leganes Central Elementary School

Leganes, Iloilo, PH

Graduation Date: March 2016

- Awards: Academic Excellence

Secondary (2016-2022)

Leganes National High School

Leganes, Iloilo, PH

Graduation Date: March 2022

- Organizations/Awards: Math Club Officer Service Awardee, With High Honors

Tertiary (2022-Present)

West Visayas State University

La Paz, Iloilo, PH

- Organizations: Vice President for External Affairs, West Esports

DOST Scholar – JLSS (2024 – 2026)

PROJECT EXPERIENCE

OrthoVision: A Computer-Aided Diagnostic System for Bone Fracture Classification and Localization

Python, PyTorch, ResNet18, YOLOv8, OpenCV, Next.js

- Developed a computer-aided diagnostic system for automatic bone fracture classification and localization from X-ray images
- Implemented a hybrid deep learning pipeline using ResNet18 for fracture classification and YOLOv8 for fracture localization
- Preprocessed and augmented X-ray images to simulate real-world imaging variability and improve model robustness
- Trained and evaluated models using standard performance metrics including accuracy, precision, recall, and F1-score
- Designed a modular system architecture supporting efficient inference and future clinical integration

SideQuest: A Mobile Platform for Sideline Gigs and Local Job Matching (Iloilo City)

Flutter (Dart), Firebase Firestore, Firebase SDKs, Cloud Firestore REST API, Android

- Developed a mobile gig marketplace that connects job seekers and employers for low-skilled, physically intensive work opportunities in Iloilo City
- Implemented core workflows for job posting, browsing, and in-app job applications with activity-based tracking (e.g., postings, pending, ongoing, history)
- Built a real-time messaging feature to support direct employer–job seeker communication, including conversation lists, message history, and notifications (buggy)
- Designed role-aware navigation and activity views so users can seamlessly switch between “job seeker” and “employer” behaviors within one account
- Integrated a Firebase-backed architecture (Firestore + SDKs/REST) for storing profiles, job posts, and messages with responsive data synchronization

Real-Time Traffic Density Estimation Using Fine-Tuned YOLOv8 Object Detection

Python, YOLOv8, OpenCV, NumPy, ONNX

- Developed a real-time traffic density estimation pipeline that detects and counts vehicles from video streams for intelligent transportation monitoring
- Fine-tuned a pre-trained YOLOv8 model on a custom top-view/aerial vehicle dataset to improve detection performance in surveillance-style viewpoints
- Implemented ROI-based vehicle counting using polygon regions and center-point filtering to count only vehicles inside target road segments
- Computed normalized traffic density using the formulation $D = N / A$ (vehicle count over ROI area) to produce consistent density metrics across frames
- Exported the trained model to ONNX to support cross-platform deployment and scalable smart-city integration

OBJECTIVE

A dedicated IT professional seeking a challenging career in a progressive organization. Eager to apply technical expertise in programming, computer assembly, and digital communication to drive innovative solutions and contribute to the organization's growth.

SKILLS

Languages: Python, C++, HTML, Tailwind CSS, PHP, JavaScript

Machine Learning and AI: Keras, TensorFlow, PyTorch, CNNs

Systems & Networking: Network traffic analysis with Wireshark, Cisco Packet Tracer, CLI and Powershell scripting

Tools: Git, Github, Vim

Interests: Artificial Intelligence and Machine Learning, CyberSecurity