

Athillah Naufal Al-Falah

Informatics Student | Web Developer | Software Engineer | IT Support | Computer Technician

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Final-year Informatics student at Universitas Pembangunan Jaya with hands-on experience in developing web, mobile, desktop, and AI-powered applications. Strongly interested in Computer Vision and Artificial Intelligence technologies. Experienced in building full-stack systems, REST APIs, computer vision solutions, embedded IoT projects, and machine learning pipelines using modern development frameworks and tools. Passionate about exploring and experimenting with operating systems such as Linux, Windows, and Android. Regularly involved in troubleshooting software and hardware issues while configuring, optimizing, and maintaining PCs and mobile devices. Seeking internship opportunities in Software Engineering, Web Development, Mobile Development, IT Support, or other related technology fields.

Education

Universitas Pembangunan Jaya

Bachelor of Informatics (Currently in Semester 6) | 2023 - Present

Current GPA (Semester 5) : 3.58 / 4.00

SMA Muhammadiyah Cipanas

Social Science | 2019 - 2022

Relevant Skills

Programming: JavaScript, Dart, C#, Python, PHP, TypeScript, SQL, NoSQL, PostgreSQL, REST API

Web Development: React, ExpressJS, VueJS, CSS, Bootstrap, SCSS, Laravel, NodeJS, FastAPI

Mobile Development: Flutter, React Native

Desktop App Development: WPF, PySide, TkInter

Database: MySQL, MariaDB, MongoDB, Firebase

IoT & Embedded: ESP32, Sensor Integration, Servo Motor, Embedded Systems, IoT Dashboard

Technical: Linux Server Administration, System Troubleshooting, Hardware Diagnostics, Firmware Recovery, Software Troubleshooting, PC Assembly, Electronic Component Troubleshooting, Hardware Technical Support, CI/CD (GitHub Actions).

Machine Learning & AI: PyTorch, TensorFlow, YOLO, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib

Tools & Workflow: Git/GitHub, Postman, Docker, Windows 10/11, Arch/Debian Linux, VS Code, Anti Gravity, Neovim, AI Tools (ChatGPT, Gemini, OpenCode, Github Copilot).

Other Skills

Soft Skills: Critical Thinking, Problem Solving, Team Collaboration, Independent, Attention to Detail

Languages: Indonesia (Native), English (Advanced)

Productivity: Microsoft Word, Excel

Design: IbisPaint, Canva, Figma, draw.io, mermaid, boardmix

Projects

ParkIt – YOLO Based Adaptive Spatial-Gap Parking Slot Classification (Bachelor Thesis, Ongoing)

Flutter, GetX, FastAPI, Python, YOLOv12, MongoDB | [Github/Parkit-Smart-Parking-Assistant](#)

- Developed a cross-platform Flutter application with a FastAPI backend to provide real-time motorcycle parking availability and vehicle location tracking.
- Integrated a YOLOv12 object detection model with a custom Adaptive Spatial-Gap Parking Slot Classification (ASB-PSC) algorithm to estimate parking slot availability from spatial gaps between parked motorcycles.
- Built RESTful APIs and MongoDB integration to manage live detection results and synchronize parking occupancy data between the AI backend and mobile application.

Used Motorcycle Value Classification from OLX Listings (2026)

Python, Selenium WebDriver, Pandas, Scikit-learn | [Github/OLX-Used-Motorcycle-Value-Classification](#)

- Built an end-to-end machine learning pipeline to scrape and preprocess 500 used motorcycle listings from OLX Indonesia using Selenium WebDriver in headless mode.
- Performed data cleaning, feature engineering, median-based imputation for missing mileage values, and keyword-based text mining to derive engine and physical condition scores.
- Designed a custom rule-based labeling strategy to automatically classify motorcycles into four purchase-worthiness categories based on market price ratio, mileage, vehicle age, and document completeness.
- Trained and evaluated Decision Tree, Random Forest, and K-Nearest Neighbors classifiers using stratified train-test splitting, achieving 90.4% accuracy and 90.3% weighted F1-score with the best-performing Decision Tree model.

Paket Kita - Parcel Tracking Website (2024)

Laravel 10, PHP, MySQL, LeafletJS, Bootstrap 5, BinderByte API | [Github/Paket-Kita](#)

- Developed a Laravel-based web application for real-time parcel tracking across multiple Indonesian courier services by integrating the BinderByte API.
- Implemented LeafletJS to display shipment status, delivery history, and interactive maps showing package origin, destination, and transit checkpoints using LeafletJS.
- Built secure user authentication, persistent tracking history using MySQL, and instant client-side filtering with vanilla JavaScript.
- Integrated and processed JSON responses from the BinderByte API to display real-time shipment status and delivery history.

Coordinated 12-DOF Quadruped Robot (2026)

Embedded C++, ESP32, ESP8266, PCA9685, Blynk IoT, I2C | [Github/Quadruped-Robot-Blynk](#)

- Designed and assembled a 12-DOF quadruped robot by integrating ESP32, PCA9685 PWM controller, and 12 servo actuators into a synchronized embedded robotic system.
- Developed embedded C++ firmware implementing coordinated diagonal gait locomotion, directional turning, and multiple posture-control routines through an I2C-based multi-servo architecture.
- Integrated the robot with a real-time Wi-Fi control interface using Blynk IoT, enabling wireless command execution and live robot operation from a mobile application.
- Calibrated servo alignment, actuator mapping, and mechanical balance to achieve stable movement and repeatable locomotion across all four legs.

Visnap - OCR-Based Desktop Image Translator(2025)

Python, PySide6, Tesseract OCR, Pillow, deep-translator | [Github/Visnap-Image-Translator](#)

- Developed a Python desktop application with PySide6 for translating text embedded in screenshots, local images, and online image URLs.
- Designed an OCR-processing pipeline using Tesseract OCR and deep-translator to automate text extraction, translation, and image rendering.
- Implemented adaptive rendering algorithms that dynamically selected translation layouts for dense documents and comic speech bubbles.

RocPaSors – Simple Windows Game (2023)

C#, .NET 6, WPF, MVC | [Github/RocPaSors](#)

- Developed a Windows desktop Rock-Paper-Scissors game using WPF and .NET 6, featuring a best-of-five gameplay system against a computer-controlled opponent.
- Applied the MVC architectural pattern to separate presentation, game logic, and persistent match history for improved maintainability.
- Implemented local file-based storage to persist completed match records across sessions and provide in-game history tracking.
- Designed an interactive desktop interface with responsive visual and audio feedback to enhance the gameplay experience.

UseNote — Note-Taking Application (2021)

Flutter, Dart, Hive, GetX, UUID | [Github/UseNote](#)

- Developed a cross-platform Flutter-based note-taking application for creating, organizing, searching, and managing personal notes with a responsive mobile interface.
- Implemented Hive NoSQL database for local data persistence, storing notes and user interface preferences without requiring a backend service.
- Applied GetX for state management, dependency injection, and navigation to build a modular and maintainable application architecture.
- Designed switchable list and grid layouts to improve note browsing and overall user experience.

Certifications

Professional Certificates & Specializations

- **IBM DevOps and Software Engineering** - Professional Certificate (2025)
- **Secure Coding in Laravel** - Specialization by Infosec (2024)
- **ASP.NET for Experienced Developers** - Specialization by Board Infinity (2024)
- **Generative AI for Business Intelligence (BI) Analysts** - Specialization by IBM (2024)
- **Learn English Beginning Grammar** - Specialization by University of California (2024)

Regular Course Certificates

- **Relational Database Design** - University of Colorado Boulder
- **Introduction to Databases** - Meta
- **Introduction to Data Engineering** - IBM

- **Python Project for Data Engineering** - IBM
- **Developing AI Applications with Python and Flask** - IBM
- **Front-End Developer Capstone** - Meta
- **Foundations of Software Testing and Validation** - University of Leeds
- **Software Testing for Developers** - Codio
- **Basic Statistics in Python** - University of Amsterdam