

Danke Hidayat

Computer Engineer & IoT Engineer

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“Even if I have to fight you, I won’t stop moving forward.”

— Maya Tendō (Revue Starlight)

Summary

- Computer and IoT Engineer with a strong background in embedded systems, full-stack development, and data analysis.
- Currently a Junior Software Developer designing and maintaining reliable software for embedded and connected systems, with upcoming work on a LoRaWAN-based IoT deployment for agriculture.
- Experienced in leading end-to-end IoT projects—from electronics design and sensor integration to cloud data pipelines and dashboard development.
- Proficient in embedded programming (Arduino, ESP32), web development (NextJS, SvelteKit, Laravel), UI/UX design (Figma), and networking (Cisco).
- Active researcher and author of journal publications on IoT applications, fuzzy logic, and User-Centered Design methodologies.
- Holds a B.App.Tech in Computer Engineering with a 3.57/4.00 GPA and maintains a technical blog exploring sensor calibration, automation, and software engineering.

Work Experience

Junior DevOps Engineer

PT. Labdha Teknika Nusantara (On-Site)

Bandung, Indonesia

Jan. 2026 – Present

- Architected and implemented **containerization** strategies using **Docker** to standardize development and production environments.
- Configured and managed **Caddy** as a reverse proxy server with automatic SSL/HTTPS to securely expose internal services to the public internet.
- Optimized server resource allocation and monitored application uptime for internal IoT dashboard services.
- Streamlined deployment workflows to reduce manual intervention and improve project delivery speed.

Junior Software Developer

PT. Labdha Teknika Nusantara (On-Site)

Bandung, Indonesia

Oct. 2025 – Present

- Design, implement, and maintain reliable software for embedded and connected systems
- Collaborate with hardware engineers, designers, and product teams to translate requirements into robust firmware and applications
- Perform integration testing, participate in code reviews, and maintain technical documentation
- Developed **trenvm** – trend-forecast magazine mobile app with Flutter featuring backend API integration
- Designed UI/UX and interactive prototypes for **trenvm** in Figma
- Contributed to ITB PRISM financial stress-testing demo app with responsive layouts and UI refinements
- Implement features bridging sensors, edge devices, and cloud data pipelines
- **Upcoming (2026):** Lead LoRaWAN-based IoT deployment for pepper agriculture in East Luwuh – network design, sensor integration, data pipelines, and farmer dashboards

Data Analyst

PT. Global Kreatif Inovasi (Remote)

South Jakarta, Indonesia

Dec. 2024 – Feb. 2025

- Collected, cleaned, and organized data sets using Google Sheets to generate workspace performance reports
- Performed data validation and quality assurance to ensure accuracy and consistency for business intelligence dashboards
- Conducted functional and usability testing for Android Enterprise Resource Management (ERM) applications

- Identified, documented, and reported software defects and user experience issues to development teams
- Created data visualizations and summaries to support decision-making processes and operational insights

Software Tester

PT. Global Kreatif Inovasi (Remote)

South Jakarta, Indonesia

Aug. 2024 – Dec. 2024

- Executed comprehensive responsive design testing across multiple mobile device resolutions and platforms
- Validated user interface implementations against Figma design specifications to ensure pixel-perfect accuracy
- Conducted exploratory testing to simulate real user behavior and evaluate application intuitiveness
- Collaborated with UI/UX designers to provide actionable feedback based on usability testing observations
- Documented detailed test scenarios, edge cases, and bug reports using issue tracking systems
- Researched Odoo ERP software modules to identify integration patterns for KompakApps development reference
- Participated in agile development cycles, contributing to quality assurance throughout the software lifecycle

Assistant IT Officer

Wyndham Hotel Casablanca (On-Site)

South Jakarta, Indonesia

Aug. 2020 – Jan. 2021

- Managed daily IT operations including data backups, security updates, and endpoint maintenance for hotel infrastructure
- Programmed and managed RFID keycard systems for staff access control and guest room security
- Diagnosed and resolved hardware/software issues across computers, printers, and network systems to minimize downtime
- Configured, installed, and maintained Oracle Point-of-Sale (POS) systems for restaurant and front desk operations
- Set up and supported audio-visual equipment and network connectivity for bi-weekly conference room meetings
- Provided technical support to hotel staff and assisted with IT inventory management

Projects

Flora

Web Developer & Electronics Engineer

South Jakarta, Indonesia

Nov. 2025 – Present

- Comprehensive environmental monitoring system built on ESP32 tracking temperature, humidity, atmospheric pressure, altitude, and soil moisture levels
- Features real-time LCD display, Blynk cloud integration for remote monitoring, and precise RTC timing with SQW interrupts
- Implements sensor fusion algorithms for accurate environmental data collection and analysis
- Designed for precision agriculture and environmental research applications with modular sensor architecture

FlowPoint-Next

Web Developer

South Jakarta, Indonesia

Nov. 2025 – Present

- Real-time energy monitoring dashboard built with Next.js, Prisma as the ORM, and PostgreSQL database
- Designed to visualize sensor data from IoT devices with interactive charts, historical trends, and analytics
- Features responsive design, RESTful API integration, and real-time data updates via WebSocket connections
- Implements user authentication, data filtering, and export functionality for comprehensive energy analysis

FlowPoint

Electronics & Embedded Engineer

South Jakarta, Indonesia

Oct. 2025 – Present

- Professional-grade IoT monitoring application built with Flutter for real-time energy management and environmental analysis
- Connects to IoT sensor networks via Blynk server infrastructure to provide detailed insights into electrical parameters, energy consumption patterns, and environmental conditions
- Features real-time data visualization, historical trend analysis, and remote monitoring capabilities
- Designed with clean architecture and responsive UI for cross-platform deployment

EcoOffice – Energy & Temperature Monitoring IoT System

Electronics & Embedded Engineer

South Jakarta, Indonesia

Sep. 2024 – Aug. 2025

- Advanced IoT monitoring system tracking electrical energy consumption and environmental conditions using ESP32 microcontroller
- Implements intelligent Mamdani fuzzy logic classification for real-time electricity and temperature analysis
- Integrates PZEM-004T for power monitoring and DHT11 for temperature/humidity sensing with enhanced calibration algorithms
- Identifies energy waste patterns in office environments through real-time fuzzy analysis
- Designed electronics schematic, software code, and Blynk app UI dashboard with Google Sheets as cloud database

EcoBin-Sorter – IoT-based Automatic Trash Bin Sorter
Electronics & Embedded Engineer

Bekasi, Indonesia
Feb. 2024 – Jun. 2024

- Smart waste sorting bin classifying organic, inorganic, and metal waste using sensor fusion technology
- Real-time waste volume reporting system with automated segregation mechanism
- Designed electronics, 3D model (Fusion 360), and Blynk dashboard for remote monitoring
- Implements ultrasonic sensors for fill level detection and capacitive/inductive sensors for waste classification

HydroleVI – Water Level Monitoring System
Electronics Engineer & Web Developer

Bogor, Indonesia
Aug. 2023 – Nov. 2023

- Three-tier water level monitoring system (Safe, Warning, Dangerous) with local siren alerts
- Real-time monitoring via Blynk mobile app and offline LCD display for remote locations
- Assembled electronics with ultrasonic sensors and warning indicator system
- Built Teams collaboration website with Laravel for project documentation and team coordination

Education

B.App.Tech in Computer Engineering
Vocational School of IPB University

Bogor, Indonesia
Aug. 2021 – Present

- Current GPA: **3.57/4.00** – Completed 139 Semester Credit Units
- Course coordinator for "Basic Computer Networking (TEK108)" and "Computational Mathematics (TEK101)"
- **Top-Performing Technical Courses:**
 - **A grades:** Embedded Systems (TEK304), Web Programming (TEK305), Cybersecurity (TEK1314), IoT Project (TEK1313)
 - **A- grades:** Machine Learning (TEK1302), Advanced Networking (TEK302), Object-Oriented Programming (TEK201)

Computer and Network Engineering
SMKN 2

Depok City, Indonesia
Aug. 2018 – Aug. 2021

- Studied networking fundamentals with hands-on experience configuring Cisco and MikroTik devices
- Served as Class President (11th grade) and Student Library Assistant, developing leadership and organizational skills
- Configured routers (TP-Link and MikroTik) for Computer-Based Test (CBT) infrastructure, supporting school examinations
- Competed in Student Competency Competition (LKS) IT Networking Systems Administration at 10th grade, ranking 11th out of 24 participants

Conference Participation

Railway Electrification Seminar

May. 2025

100 Years of Railway Electrification in Indonesia: Railway Electrification & Sustainable Mobility

Online, Den Haag

Micro IT Webinar Series #14

Oct. 2022

Follow Your Passion: Creating Potential Business Based on Your Passion

Online, Bogor

Micro IT Webinar Series #9

Sep. 2021

What Do's and Don'ts When Being an UI/UX Designer

Online, Bogor

Licenses & Certifications

Hardware Installation Supervisor

Oct. 2025 – Oct. 2028

Occupational Certification: Hardware Installation Supervisor – Completed all required training and assessment Bogor, Indonesia

Test of English for International Communication (TOEIC)

Dec. 2020 – Dec. 2022

Test of English for International Communication – Score: 755 (Listening: 400/495, Reading: 355/495) Depok City, West Java

Junior Cybersecurity Analyst Career Path Exam

Nov. 2023

Completed Cybersecurity Analyst career path certification exam

CCNP Enterprise: Advanced Routing

Dec. 2023

Completed CCNP Enterprise Advanced Routing course

CCNP Enterprise: Core and Concentration

Nov. 2023

Completed advanced networking courses

CCNA: CyberOps Associate

Dec. 2023

Completed Security Operations course

CCNA: Enterprise Networking, Security, and Automation

Nov. 2023

Completed Network Security course

CCNAv7: Switching, Routing, and Wireless Essentials

Jun. 2023

Completed CCNA Switching, Routing, and Wireless Essentials course

Publications

Author

IPB

Implementation of Mamdani Fuzzy Logic for Real-Time Monitoring of Electrical Energy and Room Temperature Based on IoT
Sep. 2024 – Aug. 2025

- IoT-based energy monitoring system utilizing Mamdani fuzzy logic to classify electricity usage and detect energy waste patterns in real time

Co-author

Journal of Applied Science, Technology & Humanities

Implementation of User Centered Design Method on CarbonArea Website User Experience – DOI: 10.62535/32w7k811 *Jun. 2025*

- Evaluation of CarbonArea website UI/UX using the User-Centered Design (UCD) approach to improve usability, interactivity, and user experience for CO₂ impact information

Co-author

Journal of Applied Science, Technology & Humanities

Designing User Interface on "HewanKu" Application Using User Centered Design Method – DOI: 10.62535/r4w8vq53 *Jun. 2025*

- UI design for a livestock trading mobile application using User-Centered Design (UCD) combined with Black Box Testing to improve usability, efficiency, and user trust

Co-author

Journal of Applied Science, Technology & Humanities

Designing a Website-Based Inventory Information System at 'NeoSkin' Cosmetics Store Using User-Centered Design – DOI: 10.62535/1q1pyn27 *Jun. 2025*

- Web-based inventory information system developed using the User-Centered Design approach and validated through Black Box Testing to ensure reliability and usability

Co-author*Implementing Fuzzy Logic to Forecast Electricity Usage Costs* — DOI: 10.62535/r6ygb628*Journal of Applied Science, Technology & Humanities*

Mar. 2025

- Electricity cost forecasting using Mamdani fuzzy logic implemented in MATLAB based on household and electrical usage variables

Co-author*Lampu Cerdas Berbasis Sensor Cahaya dan Deteksi Gerakan untuk Ruangan Kerja* — DOI: 10.59897/jsi.v5i3.217*Jurnal Sains Indonesia*

Dec. 2024

- Smart lighting system using light sensors and PIR motion detection to reduce office energy consumption through automated lighting control

Writings

Author*Automating Calibration and Report Generation with Google Colab**dankehidayat.my.id*

Oct. 2025

- A hands-on exploration of comparing DHT11 and HTC-1 sensors, applying data-driven calibration techniques, and automating a complete scientific report workflow using Python, fuzzy logic, and \LaTeX in Google Colab

Author*Energy Monitoring System Calibration: Linear Regression Approach**dankehidayat.my.id*

Oct. 2025

- A practical walkthrough of improving DHT11 temperature and humidity accuracy through linear regression for more reliable energy monitoring systems

Author*Computers Were Faster When They Were Slower**dankehidayat.my.id*

Nov. 2024

- An analysis of why modern computers often feel slower despite powerful hardware, focusing on software bloat, abstraction overload, and inefficient engineering practices

Author*Social Media and the Mechanics of Behavioral Influence**dankehidayat.my.id*

Aug. 2021

- A reflection on how modern social media platforms replicate B.F. Skinner's behavioral conditioning models, subtly shaping user behavior, attention, and decision-making

Languages

Indonesian: Native or Bilingual Proficiency**English:** Upper Intermediate (TOEIC Score: 755)**Japanese:** Basic or

Elementary Proficiency

Honors & Awards

11th Place

Participant of LKS IT Networking Systems Administration

2019

Depok City, Indonesia

Technical Skills

- Programming:** TypeScript, JavaScript, C/C++, Flutter/Dart, Python, SQL
- Embedded Systems & IoT:** Arduino, ESP32, Blynk, LoRaWAN, Proteus, Eagle, Fritzing, KiCAD
- Web Development:** NextJS, SvelteKit, Tailwind, Laravel, Swagger
- Databases & ORM:** PostgreSQL, Prisma, MongoDB
- UI/UX Design:** Figma and Canva

- **Data Analysis:** Google Sheets, Excel, Google Colab, Jupyter Notebook
- **Networking:** Cisco, MikroTik, TCP/IP, Network Security, Cyber Security
- **Tools:** Git, Fusion 360, Odoo, MATLAB, Docker

Additional Experience

Member

Nikukabu (Japanese Club)

Aug. 2019 - Jun. 2021

Depok, West Java, Indonesia

- Learned to read and write Hiragana and Katakana scripts
- Practiced basic Japanese conversation skills through anime, songs, and language games
- Explored Japanese culture including customs, etiquette, and social norms
- Studied traditional arts: tea ceremony, calligraphy, and festival celebrations (Tanabata, Obon, Hinamatsuri)

Member

Robotic Club

Aug. 2019 - Jan. 2020

Depok, West Java, Indonesia

- Learned schematic design and PCB layout using Eagle software
- Studied electronic components: transistors, capacitors, diodes, and sensors
- Built and programmed a line-follower robot as part of a team project

Self-Paced Learner & Contributor

FreeCodeCamp

Jan. 2017 - Dec. 2019

Online (South Jakarta, Indonesia)

- Completed comprehensive, project-based curriculum in front-end web development, earning multiple certifications
- Built responsive web projects: e-commerce mockup, personal portfolio sites, and custom browser start page using HTML5, CSS3, and JavaScript
- Gained experience with modern front-end tools: React components, Bootstrap, jQuery, and Git/GitHub workflows
- Developed understanding of mobile-first responsive design, accessibility principles, and client-side rendering