

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 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

FlowPoint

Professional IoT Monitoring Application

South Jakarta, Indonesia

Sep. 2024 – Aug. 2025

- 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

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

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

- Current GPA: 3.57/4.00
- Course coordinator for "Basic Computer Networking" and "Computational Mathematics"

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
- Participated in the Taruna discipline program throughout all three years, fostering responsibility and teamwork
- Configured routers (TP-Link and MikroTik) for Computer-Based Test (CBT) infrastructure, supporting school examinations
- Competed in LKS (Lomba Kompetensi Siswa) IT Networking Systems Administration (10th grade), ranking 11th out of 24 participants

Licenses & Certifications

Hardware Installation Supervisor

Jun. 2025

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

Railway Electrification Seminar

Mar. 2025

100 Years of Railway Electrification in Indonesia: Railway Electrification & Sustainable Mobility – Completed seminar series Online, Den Haag

Cisco Certified Network Associate (CCNA)

Dec. 2023

Cisco CyberOps Associate – Completed Security Operations course Bogor, Indonesia

Cisco Certified Network Associate (CCNA)

Nov. 2023

Enterprise Networking, Security, and Automation (ENSA) – Completed Switching, Routing, and Wireless Essentials (SRWE) and Network Security (NS) courses Bogor, Indonesia

Cisco Certified Network Professional (CCNP)

Nov. 2023

Enterprise Core and Concentration – Completed advanced networking courses Bogor, Indonesia

Micro IT Webinar

Oct. 2022

Webinar Series #14: Follow Your Passion: Creating Potential Business Based on Your Passion – Completed webinar Online, Bogor

Micro IT Webinar

Sep. 2021

Webinar Series #9: What Do's and Don'ts When Being an UI/UX Designer – Completed webinar Online, Bogor

TOEIC

Dec. 2020

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

Journals

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: 10.62535/32v7k811 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*Journal of Applied Science, Technology & Humanities**Implementing Fuzzy Logic to Forecast Electricity Usage Costs — DOI: 10.62535/r6ygb628 Mar. 2025*

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

Co-author*Jurnal Sains Indonesia**Lampu Cerdas Berbasis Sensor Cahaya dan Deteksi Gerakan untuk Ruangan Kerja — DOI: 10.59897/jsi.v5i3.217 Dec. 2024*

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

Writings

Author*dankehidayat.my.id**Automating Calibration and Report Generation with Google Colab**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*dankehidayat.my.id**Energy Monitoring System Calibration: Linear Regression Approach**Oct. 2025*

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

Author*dankehidayat.my.id**Computers Were Faster When They Were Slower**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*dankehidayat.my.id**Social Media and the Mechanics of Behavioral Influence**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

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, Jupyter Notebook
- **Embedded Systems & IoT:** Arduino, ESP32, Blynk, LoRaWAN
- **Web Development:** NextJS, SvelteKit, Tailwind, Laravel
- **Databases & ORM:** PostgreSQL, Prisma
- **UI/UX Design:** Figma, Prototyping, User-Centered Design
- **Data Analysis:** Google Sheets, Excel, Data Visualization
- **Networking:** Cisco, MikroTik, TCP/IP, Network Security
- **Tools:** Git, Fusion 360, Odoo, MATLAB
- **Testing:** UI/UX Testing, Functional Testing, Integration Testing, Black Box Testing

Extracurricular Activities

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