IKHLAS TAUFIQUL HAKIM

Software Engineer | Flight Scientist

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ABOUT ME

Software Engineer with experience in developing web, desktop, mobile applications, IoT systems, and cloud-based solutions. Skilled in Python, JavaScript, React.js, Flutter, Firebase, Golang, and Google Cloud Platform. Passionate about designing scalable software, automating processes, and delivering data-driven solutions.

EDUCATION

IPB University | 2018-2022
Applied Meteorology
B.Sc. in Applied Meteorology, Faculty of Mathematics and Natural Sciences
GPA: 3.55 / 4.00
Aug 2018 – Sep 2022

SMAN 3 Cibinong | 2015-2018
High School Diploma - Natural Sciences and Biology
Awards / Achievements
- 2nd Place, Regional Computer Science Olympiad Bogor (2017)
Official certificate available for provincial-level participants; regional winner listing not included due to administrative error.
- 2nd Place, Regional German Language Olympiad A1 Level Bogor (2016)

WORK EXPERIENCE

Flight Scientist – PT Anugerah Wisesa Selaras (Weathermod.id) | Jun 2024 – Aug 2025
Developed Python-based desktop applications for weather data visualization and seeding tracking, featuring interactive mapping, file management & encryption, and data analysis modules. Built an internal server using Firebase Realtime Database for real-time data communication between desktop and web applications. Automated daily TRMM JAXA weather data retrieval for analysis and system integration. Developed a Flutter-based web application mirroring desktop functionality. Supported artificial rain operations and atmospheric research through scientific flight missions, including weather data collection, in-flight seeding decision-making, aerial operations coordination, and development of meteorological measurement instruments.

IoT Engineer – Yayasan Patembayatan Sinau Bumi | Oct 2023 – Jun 2024
Designed supporting instrumentation for data collection during field practicum activities. Assisted students with capstone projects, including automated watering systems, poultry house temperature control, and solar-powered irrigation pumps. Developed an IoT-based RFID automatic attendance system and built an automated monitoring station to measure water level and soil moisture.

Junior Software Developer – IPB Environmental Research Center | Jun 2023 – Nov 2023

Contributed to the development of a prediction system and website, including automated data extraction using Python + Selenium + PostgreSQL, prediction model pipelines, backend API development with Golang, and interactive dashboard implementation.

Research and Development Engineer – CCROM SEAP | Sep 2022 – May 2023

Developed a real-time data monitoring website and an Android app for GPS logging and real-time data streaming integrated with Firebase Realtime Database. Built an automated email notification system for instrument alerts and collaborated with BRIN on device trials across five Indonesian Botanical Gardens.

Research Intern – CCROM SEAP | Dec 2020 – Sep 2022

Designed a low-cost portable IoT-based air quality measurement instrument with temperature, humidity, pressure, PM2.5, PM10, and CO_2 sensors. Conducted field testing for data validation and published a paper at the 2nd International Conference on Tropical Meteorology and Atmospheric Sciences (2021).

CORE SKILLS

Python | JavaScript | Java | C++ | Dart | React.js | Node.js | Flutter | HTML5 | CSS | PostgreSQL | MongoDB | Firebase | Google Cloud Platform | Docker | CI/CD | Machine Learning | AI | SOLID Principles | Data Analysis

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CERTIFICATIONS (SELECTED & RELEVANT)

Web & Back-End Development:
- Back-End JavaScript (Dicoding, 2025–2028)
- Front-End Web with React (Dicoding, 2025–2028)
- Web Development Fundamentals (Dicoding, 2025–2028)

Programming & Software Engineering:
- Python, Java, C, Dart, SOLID Principles (Dicoding, 2023–2027)

Mobile & IoT:
- Flutter & Android App Development (Dicoding, 2020–2026)

Cloud & AI:
- Google Cloud Essentials, Firebase, Serverless Development, AI & ML with Vertex AI & Document AI (Google Cloud Skills Boost, 2022–2025)

Data & Machine Learning:
- MongoDB for SQL Experts, Data Preparation for ML APIs, Machine Learning Basics (Dicoding, MongoDB, 2023–2024)

Cybersecurity:
- Cybersecurity Fundamentals (ITBOX, Cisco, 2023–2025)