

Rahmatullah R, S.Kom.

Makassar, Sulawesi Selatan

+6287788362583 | mamatmks45@gmail.com | [linkedin.com/in/fnilvuwu](https://www.linkedin.com/in/fnilvuwu) | [GitHub](#) | [Website](#)

Profile Summary

AI Engineer and Computer Science graduate focused on production machine learning, **computer vision**, **NLP**, and **generative AI**. Builds and deploys end-to-end solutions using **Python**, **PyTorch**, **TensorFlow**, **YOLO**, **OpenCV**, **FastAPI**, **Docker**, **LangGraph**, and **FAISS** for real-time vision, **RAG**, **LLM** applications, forecasting, optimization, and speech processing. Co-founded an AI-enabled platform serving **400+ active users** with **1,600+ content entries**. Delivered **14 paid machine learning and software development projects** plus **25 paid graphic and video design projects**. Published **multiple research articles in international journals**. Won **3 design competitions** and **2 hackathons**.

Core Skills

Programming Languages: Python, SQL, Java, JavaScript, Kotlin, Bash, PHP

Machine Learning & Data: scikit-learn, Pandas, NumPy, XGBoost, Random Forest, ARIMA, Genetic Algorithms, Data Preprocessing, Feature Engineering, Jupyter Notebook

Deep Learning & NLP: TensorFlow, Keras, PyTorch, TensorFlow.js, TensorFlow Lite, CNN, LSTM, ResNet50, VGG, IndoBERT, StyleGAN, DCGAN, JoJoGAN, DLDL-v2, VOSK

Computer Vision: YOLO, OpenCV, MediaPipe, ByteTrack, OCR, Object Detection, Image Classification, Facial Landmarks, Real-Time Tracking

Generative AI & LLM: Gemini API, LangGraph, Retrieval-Augmented Generation (RAG), FAISS Vector Search, Prompt Engineering, Generative Modeling

Backend, Web & Mobile: FastAPI, Flask, Streamlit, React, Next.js, Laravel, WordPress, Elementor, AdminLTE, Tailwind CSS, Android, Firebase

Databases: PostgreSQL, MySQL

Cloud, MLOps & DevOps: Google Cloud, Microsoft Azure, AWS, Docker, Apache, Linux, GitHub, Model Deployment, API Deployment

IoT & Embedded Systems: ESP8266, Arduino, Blynk

Analytics & Visualization: Excel, Power BI, Tableau, Matplotlib, Seaborn, Plotly

Professional Experiences

Aksarahub.id – Co-founder & AI Engineer | [Website](#) **Nov 2025 – Present**

- Co-founded and scaled the platform to **400+ active users** and **1,600+ content entries**, owning AI feature delivery and product iteration from implementation through release.
- Architected core language-learning capabilities including **Hanzi stroke recognition**, a **Buginese keyboard layout**, and automated translation workflows to support multilingual content creation and user engagement.

Braincore.id – ML Engineer Division | [Website](#) **Jan 2024 – Present**

- Delivered **5 paid machine learning projects**, translating client requirements into systems including an attention-based **LSTM XSS** detection browser extension and a **genetic algorithm** scheduling optimizer.
- Engineered **IoT-enabled** location tracking and **ARIMA** rice-price forecasting solutions to support operational monitoring and data-informed decision-making.
- Built a **YOLO** and **OpenCV** computer vision pipeline for palm-oil ripeness classification and automated counting, supporting agricultural quality-control workflows.

Infinite Learning – Hybrid Cloud & Red Hat Cohort | [Certificate](#) **Feb 2024 – Jul 2024**

- Provisioned **Apache** services and containerized workloads with **Docker**, including an automated PDF conversion pipeline for repeatable server-side processing.
- Administered **Linux** environments and automated operational tasks with **Bash**, strengthening deployment, troubleshooting, and server-management practices.
- Earned the **Red Hat Certified System Administrator (RHCSA)** credential through a proctored examination in Batam.

Mobile Development (Android) Laboratory Assistant | [Certificate](#), [Repository](#) **Feb 2024 – Jul 2024**

- Designed curriculum, teaching materials, and practical exercises for **40+ students** learning **Android mobile development**.
- Led hands-on laboratory sessions and mentored students in mobile application architecture, implementation, and systematic debugging.

Bangkit Academy – Machine Learning Cohort | [Certificate](#) **Aug 2023 – Jan 2024**

- Co-developed GymGuide, integrating a **VGG-based CNN** for gym-equipment classification (**89% accuracy across 23 classes**), a **Gemini API** fitness assistant, and prompt-engineered food classification with nutritional guidance in an Android application.
- Graduated with **Distinction**, ranking in the **top 10% of 4,000 participants**.

- Taught **Java** and object-oriented programming principles to **40+ university students**, producing structured lecture materials and reusable instructional resources.
- Mentored students through multi-class programming projects, reinforcing software design, debugging, encapsulation, inheritance, and maintainable coding practices.

Fiverr – Freelance Graphic Designer | [Website](#)

Jan 2020 – Present

- Delivered **25+ client graphic-design projects**, managing requirements, iteration, quality control, and on-time delivery across branding and visual-communication work.
- Owned end-to-end design workflows from concept development through final assets, translating client objectives into consistent visual identities.

SITe.Com – Leader | [Certificate](#)

Jan 2018 – Jan 2019

- Led an organization of **50+ members**, coordinating internal operations and aligning secretarial, finance, and program divisions around shared priorities.
- Directed cross-functional planning and event execution, assigning responsibilities and coordinating stakeholders to support reliable operations and community engagement.

Project Experiences

Textile & Tailor Landing Page | *React, Tailwind* | [GitHub](#), [Live](#)

May 2026

- Engineered and deployed a responsive **React** and **Tailwind CSS** landing page that organizes textile products and tailoring services into a mobile-friendly customer experience.

LangGraph RAG Web Agent | *LangGraph, FAISS* | [GitHub](#), [Demo](#), [Live](#)

Mar 2026

- Engineered a **Retrieval-Augmented Generation (RAG)** web agent with **LangGraph** orchestration and **FAISS** vector search to retrieve website context and generate targeted summaries through a deployed Streamlit interface.

Shopee Review Sentiment Analysis | *IndoBERT, Streamlit* | [GitHub](#), [Live](#)

Mar 2026

- Built an **IndoBERT** NLP pipeline for Shopee review sentiment analysis and exposed product-level sentiment and sales-performance insights through an interactive **Streamlit dashboard**.

Automatic Scheduler using Genetic Algorithm | *Genetic Algorithm, Flask* | [GitHub](#), [Live](#)

Mar 2026

- Implemented a constraint-aware **Genetic Algorithm** and **Flask** application that optimizes resource and personnel assignments to generate conflict-free schedules.

Soccer Field Rent Information System | *PHP, Laravel, MySQL* | [GitHub](#)

Mar 2026

- Developed a **Laravel** and **MySQL** booking platform with availability tracking, reservation management, and administrative workflows for soccer-field operations.

VoiceScribe AI | *VOSK, FastAPI* | [GitHub](#), [Demo](#), [Live](#)

Feb 2026

- Implemented a lightweight, real-time speech-to-text service with **VOSK** and **FastAPI**, optimizing inference for **CPU deployment** and integrating transcript summarization.

Fertilizer Distribution Information System | *React, FastAPI* | [GitHub](#), [Live](#)

Feb 2026

- Designed a multi-role **React** and **FastAPI** system for farmers, administrators, and distributors to coordinate subsidized-fertilizer allocation and improve distribution transparency.

Eatitude.id | *React, Next.js, Gemini* | [GitHub](#), [Demo](#), [Live](#)

Sep 2025

- Developed a nutrition application with **Gemini API**-generated meal recommendations, personalized daily planning, and nutritional tracking across a **React** and **Next.js** interface.

Batak Script Learning Website | *React* | [GitHub](#), [Demo](#), [Live](#)

Aug 2025

- Built an interactive **React** learning platform for Batak script, implementing experience-point and health-based gamification to structure learner progression and engagement.

Automatic License Plate Recognizer | *React, YOLO, PostgreSQL, FastAPI* | [GitHub](#),
[Demo](#), [Live](#)

Aug 2025

- Engineered an automated parking pipeline using **YOLO** for license-plate recognition and vehicle classification, integrated with a **FastAPI** service and **PostgreSQL** for persistent vehicle-event management.

AI News Hub Website | *React, Next.js* | [GitHub](#), [Demo](#), [Live](#)

Aug 2025

- Developed a **Next.js** AI-news aggregator that ingests updates from multiple public APIs and presents centralized, real-time industry coverage through a deployed web interface.

Myntra Clothing Sales Dashboard | *Power BI* | [GitHub](#)

May 2025

- Built an interactive **Power BI** dashboard with product-tag, color, and name filters to analyze total sales profit, units sold by rating and category, and product-level performance.

Smartphone Price Prediction | *Random Forest Regression* | [GitHub](#), [Demo](#), [Live](#)

May 2025

- Trained a **Random Forest Regression** model on Indonesian market and device-specification data to estimate smartphone prices, then delivered predictions through a deployed Streamlit application.

Vehicle Counting and Tracking | *ByteTrack, YOLO, Streamlit* | [GitHub](#), [Demo](#), [Live](#)

May 2025

- Implemented real-time vehicle detection, tracking, and counting with **YOLO** and **ByteTrack**, deploying the workflow in **Streamlit** for traffic-flow analysis.

- Cigarette Detection** | *YOLO, Streamlit* | [GitHub](#) May 2025
- Developed a **YOLO** cigarette-detection pipeline and **Streamlit** interface for automated image-based identification, review, and monitoring.
- Online Voting Website** | *PHP, AdminLTE, MySQL* | [GitHub](#) May 2025
- Designed and deployed a **PHP**, **MySQL**, and **AdminLTE** voting system for Hasanuddin University Faculty of Law Student Executive Board elections, hosting the application on a **Biznet server** with a **Domainesia** domain.
- FishGAN** | *StyleGAN* | [GitHub](#) Feb 2025
- Implemented a **StyleGAN** generative modeling pipeline to synthesize realistic fish imagery for research experimentation and computer-vision data augmentation.
- AniGAN** | *DCGAN* | [GitHub](#) Feb 2025
- Engineered and trained a **DCGAN** image-synthesis pipeline to generate original anime character samples and evaluate adversarial-training behavior.
- TRG-DSAI Website** | *Wordpress, Elementor* | [Demo](#), [Live](#) Nov 2024
- Architected and deployed a **WordPress** and **Elementor** website for the Data Science and AI Thematic Research Group, organizing research outputs and academic expertise for Prof. Armin Lawi.
- XSS Detection using LSTM with Attention** | *TensorFlow, Keras, NLP* | [GitHub](#), [Demo](#), [Live](#) Sep 2024
- Trained an attention-enhanced **LSTM** NLP model for cross-site scripting detection, achieving **98% training and validation accuracy**, and deployed inference through a web application and browser extension.
- Smart Cultivation System** | *Flask, XGBoost, ESP8266* | [GitHub](#) Jul 2024
- Engineered an **IoT** cultivation system combining **ESP8266** sensor integration, **XGBoost** growth prediction, and a **Flask** dashboard, achieving $R^2 = 99.8\%$ for fish length and weight estimates.
- Road Crack Classification, ResNet vs YOLO** | *PyTorch, YOLO, OpenCV* | [GitHub](#), [Demo](#), [Live](#) Jun 2024
- Benchmarked **ResNet** and **YOLO** road-crack models in **PyTorch**, using **OpenCV** preprocessing to compare classification performance and inference speed.
- Semi-Automatic Sprinkler** | *Blynk, Arduino* | [GitHub](#) Jun 2024
- Engineered a semi-automatic irrigation controller with **Arduino**, **Blynk** remote operation, and timer-based watering logic to support more controlled water usage.
- Spicetify Mobile Application** | *PyTorch, YOLO, OpenCV* | [GitHub](#) Jun 2024
- Built a mobile spice-classification workflow using **YOLO** and **OpenCV**, integrating deep-learning inference into an application for image-based identification.
- Palm Oil Ripeness Counting** | *PyTorch, YOLO, OpenCV* | [GitHub](#), [Demo](#) Jan 2024
- Developed a **YOLO** and **OpenCV** computer-vision pipeline for palm-oil ripeness classification and automated object counting to support agricultural inspection.
- GymGuide Mobile Application** | *Android, ResNet50, TFLite, Firebase, Gemini* | [GitHub](#), [Demo](#) Dec 2023
- Co-developed an Android application using **ResNet50** and **TensorFlow Lite** for on-device gym-equipment classification, with **Firebase**, a **Gemini API** fitness assistant, and food-based nutritional tracking.
- Facial Emotion Recognition Website** | *CNN, TensorFlow.js, OpenCV* | [GitHub](#), [Live](#) Aug 2023
- Implemented a browser-based facial-emotion recognition pipeline with a **CNN**, **TensorFlow.js**, and **OpenCV**, enabling real-time webcam inference without a server round trip.
- Facial Age Estimation Web Application** | *DLDL-v2, TensorFlow.js, OpenCV* | [GitHub](#), [Live](#) Aug 2023
- Deployed a **DLDL-v2** facial-age estimation model with **TensorFlow.js** and **OpenCV**, enabling real-time age inference from webcam frames directly in the browser.
- JoJoGAN Simpsons** | *PyTorch, JoJoGAN, StyleGAN* | [GitHub](#) Jul 2023
- Implemented one-shot facial style transfer with **JoJoGAN**, **PyTorch**, and **StyleGAN** fine-tuning to generate Simpsons-style portraits while preserving identity characteristics.
- Sales Dashboard** | *Tableau* | [Live](#) Jun 2023
- Developed an interactive **Tableau** sales dashboard covering cost, revenue, profit, product and distributor performance, time-series trends, yearly comparisons, and geographic distribution.
- Eye Blink Detector** | *MediaPipe, OpenCV, Android* | [GitHub](#), [Demo](#) Apr 2023
- Developed an Android eye-blink detection pipeline using **MediaPipe** facial landmarks and **OpenCV** for real-time landmark tracking and blink-state recognition.

Research Articles

- Benchmarking Pretrained Visual Encoders for Image-to-Image Product Retrieval on Fashion Catalog Metadata** | *Accepted* | IEEE Xplore | BTS-I2C 2026 Aug 28, 2026
- Beyond Market Basket Analysis: Hypergraph Neural Networks for Basket Completion and Next-Basket Recommendation on Retail Transactions** | *Accepted* | IEEE Xplore | BTS-I2C 2026 Aug 28, 2026

A Unified Model Context Protocol SQL Tool Interface for Agentic AI Systems: Architecture and a Reproducible SQL Execution Baseline <i>Accepted</i> IEEE Xplore IC3INA 2026	Aug 18, 2026
Lightweight CNN Benchmark for Liver Fibrosis Ultrasound Classification with Explainable AI <i>Accepted</i> IEEE Xplore ICITRI 2026	Jul 26, 2026
Comparative Evaluation of Transformer and Lightweight Vision Models for Glaucoma Detection from Fundus Images <i>Accepted</i> IEEE Xplore ICITRI 2026	Jul 26, 2026
Omniflow: An AI-Native Modular ERP Ecosystem with Integrated Observability for Intelligent Enterprise Systems <i>Accepted</i> IEEE Xplore ICVEE 2026	Jul 17, 2026
Fitpedia as a Model for Innovative Solutions to Improve Public Fitness Through AI Technology <i>Published</i> HealthSense: Journal of Public Health Perspective Article	Dec 28, 2024

Education

Universitas Hasanuddin (GPA: 3.51/4.00) <i>Bachelor of Computer Science</i>	May 2020 – July 2026
---	----------------------

Licenses & Certifications

Machine Learning & Generative AI - Associate AI Engineer for Developers, DataCamp— Certificate - AI Engineer for Developers Associate, DataCamp— Certificate - TensorFlow Developer Certificate, Google— Certificate - Machine Learning Specialization, DeepLearning.AI and Stanford University— Certificate - Generative Adversarial Networks (GANs) Specialization, DeepLearning.AI— Certificate - Azure AI Fundamentals, Microsoft— Certificate - Mathematics for Machine Learning and Data Science Specialization, DeepLearning.AI— Certificate - Learn the Basics of AI, Dicoding— Certificate - Learn the Basics of Data Science, Dicoding— Certificate - Prompt Engineering for Software Developers, Dicoding— Certificate - Learn Machine Learning for Beginners, Dicoding— Certificate - Building Gen AI Applications with Microsoft Azure, Dicoding— Certificate - Learn the Fundamentals of Deep Learning, Dicoding— Certificate - Learn the Fundamentals of Generative AI, Dicoding— Certificate - Developing Generative AI with LLMs, Dicoding— Certificate - Building Machine Learning Systems, Dicoding— Certificate - Learn Machine Learning Implementation with Google Cloud, Dicoding— Certificate Data & Visualization - Certified International Specialist in Data Visualization, PASAS Institute— Certificate - Data Analytics Specialization, Google— Certificate - Learn the Basics of Data Visualization, Dicoding— Certificate - Learn the Basics of Structured Query Language (SQL), Dicoding— Certificate - Learn How to Apply Data Science with Microsoft Fabric, Dicoding— Certificate - Learn the Fundamentals of Data Processing, Dicoding— Certificate Cloud, DevOps & Systems - Certified System Administrator, Red Hat— Certificate - GitHub Foundations, Microsoft— Certificate - Learn the Basics of Git with GitHub, Dicoding— Certificate - Learn the Basics of Google Cloud, Dicoding— Certificate - Learn the Basics of Cloud Computing and Generative AI on AWS, Dicoding— Certificate - Learn to Build Back-End Apps for Beginners with Google Cloud, Dicoding— Certificate	Programming & Software Engineering - IT Specialist – Python, Certiport— Certificate 100 Days of Code: The Complete Python Pro Bootcamp, The App Brewery— Certificate - Python (Basic), HackerRank— Certificate - Java (Basic), HackerRank— Certificate - JavaScript (Basic), HackerRank— Certificate - JavaScript (Intermediate), HackerRank— Certificate - Python Development Professional, Microsoft— Certificate - Introduction to Programming Logic (Programming Logic 101), Dicoding— Certificate - Getting Started with the Basics of Programming to Become a Software Developer, Dicoding— Certificate - Getting Started with Programming in Kotlin, Dicoding— Certificate - Getting Started with Dart Programming, Dicoding— Certificate - Learn the SOLID Programming Principles, Dicoding— Certificate - Learn to Build Android Apps for Beginners, Dicoding— Certificate - Learn How to Build Flutter Apps for Beginners, Dicoding— Certificate - Learn Machine Learning Implementation for Flutter, Dicoding— Certificate - Learn the Fundamentals of Android App Development, Dicoding— Certificate - Getting Started with Programming in Haskell, Dicoding— Certificate - Learn the Basics of Web Programming, Dicoding— Certificate - Learn Front-End Web Development for Beginners, Dicoding— Certificate - Learn to Build Web Apps with React, Dicoding— Certificate - Learn AI Implementation in Web Applications, Dicoding— Certificate - Learn the Basics of JavaScript Programming, Dicoding— Certificate - Learn Back-End Programming for Beginners with JavaScript, Dicoding— Certificate - Getting Started with Python Programming, Dicoding— Certificate - Learn Back-End Programming for Beginners with Python, Dicoding— Certificate - Learn the Basics of Mobile App Development, Dicoding— Certificate Cybersecurity & Quality Assurance - Software Quality Assurance, Pro Sigmaka— Certificate - Cybersecurity Analyst Specialization, IBM— Certificate Professional Development & Product - English for Business Communication— Certificate - Technology & Entrepreneurship, Arizona State University— Certificate - Entrepreneurship and Innovation Track, U.S.-ASEAN Center and Arizona State University— Certificate - Learn the Basics of UX Design, Dicoding— Certificate - Learn the Basics of Project Management, Dicoding— Certificate
--	--

Awards & Achievements

First Place, OpenTheGate Hackathon 2025 — BSS Parking—Certificate, Post Speaker, Google Build with AI 2026 — GDGoC Makassar—Certificate, Post Best Creativity Award, AI Hackathon TechnoArt 2025—Certificate, Post Finalist, Batak Script Website Competition — Domain.id—Certificate Second Place, Makassar Hackathon 2024 — Binar Academy, Kemenpora RI—Certificate, Post Funded Project, PKM-PI 2023 — Ministry of Education and Culture—Certificate First Place, Graphic Design Competition (ENIAC VOL. I) — SMAN 11 Makassar—Certificate First Place, Graphic Design Competition (ENIAC VOL. II) — SMAN 11 Makassar—Certificate Second Place, Videography (Justice Show) — Ujung Pandang State Polytechnic—Certificate Finalist, CTF COMPFEST 15 — University of Indonesia—Certificate	
--	--

Professional References

Eric Julianto — CEO, Braincore.id: +62 812-9985-1190 Prof. Armin Lawi — Leader, TRG-DSAI: +62 813-5579-4212 Andi Putra — CEO, Aksarahub.id: +62 823-1395-2665	
--	--