

# M Shafri Syamsuddin

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## Summary

Computer vision and NLP engineer translating research-grade models into deployable products. Experience building YOLO-based malaria diagnostics, zero-shot sentiment analytics, and Docker-first inference services. Comfortable driving projects end-to-end: data strategy, modelling, MLOps, and stakeholder alignment.

## Experience

### CEO & Product Lead

Jun 2022 – Dec 2023

JIWANA (Startup at UBIC Incubation), Yogyakarta, ID

- Represented the mental-health chatbot startup across incubation events, forging partnerships and securing mentorship support.
- Directed product roadmap and team coordination, translating user research into actionable requirements.
- Co-designed conversational flows and spearheaded prototype experimentation to validate technical feasibility.

### Data Scientist Trainee

Oct 2024 – Mar 2025

Rakamin Academy, Remote

- Completed intensive programme covering DBMS, SQL, Python (NumPy, pandas), statistics, scikit-learn, classical ML, ensemble methods, and deep learning.
- Delivered an automated CV summarisation pipeline using NLP techniques to evaluate applicants on academic, social, and professional criteria.
- Practised end-to-end MLOps fundamentals: experiment tracking, evaluation, and deployment-readiness documentation.

### Human Resource Development Staff

Sep 2020 – Jun 2022

Ikatan Mahasiswa Indonesia Xiaozhuang (IMIX), Yogyakarta, ID

- Designed and delivered capability-building programmes covering technical and soft skills for student members.
- Managed performance assessments, feedback loops, and events to sustain an inclusive, high-performing community.

## Selected Projects

### Malaria Parasite Stage Detection

2024 – Present

- Master thesis project creating assistive lab tooling with YOLOv8 & Faster R-CNN ensembles enhanced by LAB colour-space feature insertion.
- Improved mAP<sub>50</sub> from 0.61 (RGB baseline) to 0.69, supporting species & life-stage detection for Plasmodium falciparum, vivax, malariae, and ovale.
- Exported models to ONNX and wrapped inference in a lightweight executable for deployment in clinics without Python stacks.

## VisionServe: CIFAR-10 Inference API

2025

- Dockerised FastAPI microservice serving CNN predictions with reproducible training pipelines and artifact versioning.
- Implemented single-command automation for preprocessing, training, metrics export, and QA artefacts (confusion matrix, history).
- Calibrated predictions with probability distributions and mounted model artefacts at runtime for lean deployment.

## Zero-shot Sentiment Intelligence Pipeline

2025

- Config-driven orchestration using `facebook/bart-large-mnli` to score public comments without domain-specific fine-tuning.
- Generated dashboards-ready outputs: sentiment trendlines, label share analyses, and confidence diagnostics.
- Structured pipeline for rapid migration into APIs or scheduled batch processing with minimal refactoring.

## Education

### Universitas Gadjah Mada

Aug 2023 – Jul 2025

Master of Computer Science (GPA 3.73/4.00)

Thesis: Feature Insertion and Colour Space Transformation for Malaria Parasite Detection in Thin Blood Smear Images using YOLO & Faster R-CNN.

- Built research publication trend warehouse from Springer metadata to surface emerging topics with advanced visual analytics.
- Led hotel price trend mining across Booking.com, Traveloka, and Tiket.com via Octoparse; analysed pricing vs. city-centre proximity.

### Nanjing Xiaozhuang University (NXU)

2020 – 2021

Double Degree Programme, Information Engineering

Completed cross-cultural coursework in systems engineering, algorithms, and applied research collaboration.

### Universitas Islam Indonesia

Sep 2018 – Jun 2022

Bachelor of Computer Science (GPA 3.68/4.00)

Undergraduate thesis: Developed a serious game that teaches algorithmic thinking for secondary education.

## Publications

Syamsuddin, M. S., et al. *Exploring the Impact of Colour Space in Malaria Parasite Detection using Deep Learning*. AMLDS 2025, Tokyo, Japan. Published by IEEE Xplore. <https://ieeexplore.ieee.org/document/11159455>

## Certifications & Scores

- TOEFL ITP – Score: 637 (ITC, Mar 2025)
- TPA Online – Score: 591 (Pusat Layanan Tes Indonesia, Jun 2025)
- Data Scientist Programme, Rakamin Academy – Completed Oct 2024 to Mar 2025

## Technical Skills

**Programming & ML:** Python, PyTorch, TensorFlow, Keras, scikit-learn, YOLOv8, OpenCV, ONNX

**NLP & Analytics:** Hugging Face Transformers, Zero-shot Learning, SQL, PostgreSQL, Power BI, Tableau, Plotly, Streamlit

**MLOps & Deployment:** FastAPI, Flask, Docker, MLflow, GitHub Actions, Apache Airflow

**Tools:** Unity, Figma, Git