

Syahrul Wicaksono

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SUMMARY

AI/ML engineer focused on building and shipping deployed systems, with strong experience optimizing deep learning models for real-time edge deployment. Final-year Telecommunication Engineering student (GPA 3.61) and graduate of the Coding Camp 2026 AI Engineer path. Skilled in computer vision (YOLO, CNN), NLP (IndoBERT), and model optimization with NVIDIA TensorRT on Jetson devices, backed by backend, IoT, and real-time data pipeline development.

EXPERIENCE

Coding Camp powered by DBS Foundation | Remote

AI Engineer Cohort Participant

February 2026 – June 2026

- Completed an intensive AI Engineer learning path covering machine learning, deep learning, computer vision, and NLP, culminating in a deployed capstone product (Seribu Cerita).
- Worked across the end-to-end ML workflow: data preprocessing, model fine-tuning, evaluation, and deployment into a live application.

PT Nexwave Central Java | Semarang, Central Java, Indonesia

Huawei Project

RF and Network Optimization Intern

January 2025 – June 2025

- Collected and analyzed large volumes of real-world network telemetry (RSRP, RSRQ, SINR, throughput) from 2G, 3G, and 4G drive tests, working directly with noisy field data.
- Post-processed drive test logs in Genex Assistant to identify weak coverage, call drops, interference, and handover failures, turning raw measurements into optimization recommendations.

PROJECTS

Real-Time Road Damage Detection on Edge Devices – Final Year Project

January 2025 – June 2026

- Optimized a YOLO11m detection model using mixed precision quantization (INT8 + FP16) with NVIDIA TensorRT for real-time inference on NVIDIA Jetson edge devices: accuracy within ~1% of the FP32 baseline (mAP@0.5:0.95), 1.92x to 2.97x inference speedup, and a 65% smaller model, versus up to 12% accuracy loss from uniform INT8.
- Applied post-training quantization with an MSE-based layer sensitivity analysis to assign precision per layer, keeping the most sensitive layers at FP16 and quantizing the rest to INT8; trained and selected the base model through multi-stage hyperparameter optimization on an 11,000-image dataset covering three damage classes.
- Built backend services and database for a deployed monitoring system streaming GPS-tagged detections from a moving vehicle to a live dashboard, validated on-road across three edge devices at vehicle speeds of 10 to 30 km/h.

Seribu Cerita – Mental Health Support Web Application

Capstone Project, Coding Camp 2026 | Team Lead (6 members)

February 2026 – June 2026

- Developed and deployed an IndoBERT-based emotion classification model achieving 86% accuracy on Indonesian text, covering data preprocessing, fine-tuning, evaluation, and integration into the application.
- Led a 6-person team from concept to live product, and applied LLM APIs (Claude, GPT) to generate user-facing explanations and summaries.

IoT-Based Smart Street Lighting (SmartPJU) – Keputih, Surabaya, Indonesia

Politeknik Elektronika Negeri Surabaya

August 2024 – October 2024

- Deployed an IoT monitoring system integrating five environmental sensors, programming an ESP32 to acquire multi-sensor data via RS485 and stream readings to a cloud REST API for real-time dashboard monitoring.
- Handled field implementation: sensor communication setup, pole installation, hardware troubleshooting, and system calibration.

EDUCATION

Politeknik Elektronika Negeri Surabaya (PENS)

Bachelor of Applied, Telecommunication Engineering | Expected Graduation: July 2026

GPA : 3.61/4.00

Final Year Project: Road Damage Detection System Using Mixed Precision Quantization on a CNN Model

TECHNICAL SKILLS

- **Programming and Data:** Python, SQL (basic), Git, Linux, REST API, data preprocessing, statistical and sensitivity analysis, telemetry and time-series data
- **AI and Machine Learning:** Deep Learning, Computer Vision (YOLO, CNN), NLP (IndoBERT, Transformers), PyTorch, TensorFlow/Keras, multi-stage hyperparameter optimization, Weights & Biases, Roboflow
- **Model Optimization and Deployment:** Mixed precision quantization (INT8/FP16), NVIDIA TensorRT, post-training quantization, layer sensitivity analysis, edge deployment (Jetson Orin AGX/Nano), real-time inference
- **IoT, Embedded and Web:** ESP32, Arduino, RS485 sensor integration, cloud-based data monitoring, Vue.js, HTML, CSS, JavaScript, web deployment and maintenance

CERTIFICATIONS AND TRAINING

Coding Camp 2026 powered by DBS Foundation – AI Engineer Learning Path | June 2026

BNSP Professional Certification (Badan Nasional Sertifikasi Profesi)

- RF Engineer for Interference Investigation / RF Engineer for CDD / RF Engineer for Capacity Monitoring – LSP Telekomunikasi Digital Indonesia, November 2025
- Planning in Access Network Coverage – LSP Politeknik Elektronika Negeri Surabaya, October 2025

Digital Talent Scholarship KOMDIGI x Train4best – Radio Network Optimization (October 2025), Drive Tester (September 2025)

ORGANIZATION EXPERIENCE

EEPIS News And Network Team (ENT) PENS

Webmaster

June 2022 - Present

- Developed and deployed the CIRT (Computer Incident Response Team) web system for campus IT security reporting and incident tracking.
- Redesigned the campus news website frontend using Vue.js, improving page load performance and modernizing the user interface.

Himpunan Mahasiswa Telekomunikasi

Kominfo

May 2024 - Present

- Led the EEPIS ON SKY livestream podcast program on YouTube, coordinating content production and digital promotion to increase audience engagement.

SOFT SKILLS

Problem Solving, Analytical Thinking, Team Collaboration, Attention to Detail, Adaptability, Technical Reporting, Interpersonal Communication