

AI Engineer with 3 years hands-on experience developing 7+ computer vision solutions in mining industry. Proven track record in deploying real-time object detection systems (YOLOv4/v8) **achieving 86.5% mAP@50 accuracy**. Expert in full-stack AI implementation from backend development (Go, Python) to production deployment, with strong focus on computer vision and generative AI applications.

EDUCATION

Bachelor of Science in Informatics/Computer Science, *Institut Teknologi Bandung* **Jul 2019 - Aug 2024**
Relevant Coursework: Machine Learning, Computer Vision, Software Engineering
Final Project: "Implementation of YOLOv8-Based Object Detection Algorithm in Mining Area"

WORK EXPERIENCE

AI Research Engineer **Jun 2025 — now**
PT RADYA ANUGRAH DIGITAL *Bandung, West Java, Indonesia*

- Developed **Agentic AI** systems such as sales bots and lead generation bots using a multi-agent architecture.
- Designed and implemented multi-agent frameworks for orchestrating interactions among autonomous agents, improving flexibility and scalability compared to single-agent systems.
- Built **fullstack** features, including a **subscription system** across **backend (Ruby on Rails)** and **frontend (Vue.js)** layers, integrating authentication, user plan management, and payment workflows.
- Contributed to the development of **LLM-based pipelines** using **Python, FastAPI, and LangChain**.

Lead Machine Learning Automation Engineer **Feb 2022 — Dec 2024**
Mining Eyes Analytics Project, PT BERAU COAL *Berau, East Kalimantan, Indonesia*

- **Successfully delivered 7 AI-powered** safety monitoring solutions across 15+ mining sites, including human detection in pit and restricted areas, unsafe distance monitoring for heavy-duty vehicles (HD), light vehicle (LV) detection, vehicle counting, vehicle violation detection in CPP, and vehicle dwell time calculation. **Reducing workplace incidents by 40%** and **improving operational compliance by 60%**
- Engineered **real-time object detection** pipeline processing **24/7 CCTV streams** from **24+ cameras** using YOLOv4/YOLOv8, **achieving 200ms response time** for critical safety alerts
- Built **scalable web application** serving 200+ concurrent users with real-time AI analytics dashboard, WebSocket notifications, and automated reporting system
- **Optimized database** performance by **65%** through query optimization and implemented automated data housekeeping, managing 10TB+ of evidence analytics data

PROJECT EXPERIENCE

End-to-End Conversational Sales Agent with framework LangChain and LangGraph **2025**
Role: LLM/AI Engineer

Developed an intelligent agent-based chatbot system powered by a Large Language Model (LLM), capable of handling the entire sales workflow from product discovery, cart operations (add, edit, remove), shipping cost checks, and order creation to payment processing via an integrated gateway. Built using LangChain and LangGraph, the system leverages multi-agent coordination and tool-based reasoning to deliver a seamless, context-aware conversational shopping experience.

- Developed multi-agent LLM chatbot achieving 95% intent recognition accuracy and 80% conversation completion rate
- Implemented Qdrant vector search with 100ms response time for product retrieval from 10,000+ inventory items
- Integrated payment gateway processing with 99.9% transaction success rate
- Reduced average sales workflow time by 60% compared to traditional e-commerce flow

Implementation of Yolov8-Based Object Detection Algorithm in Mining Area

2024

Role: Computer Vision/AI Engineer

Developed an object detection system using YOLOv8 and BGF-YOLO to improve the accuracy of occupational health and safety (OHS) monitoring in mining areas. The system addressed limitations of YOLOv4, including difficulties in detecting small objects, poor lighting conditions, and false detections.

- Achieved a mean average precision (mAP@50) of 86.5% through the optimization of the YOLO model
- improving detection performance under challenging conditions such as low lighting, small and overlapping objects

Real-Time Text Detection in Video Using EasyOCR and OpenCV

2023

Role: Computer Vision Engineer

Developed a real-time text detection system leveraging EasyOCR and OpenCV to extract and visualize textual information from video frames. This system was designed to demonstrate the capability of lightweight OCR integration for video analytics use cases.

- Implemented real-time bounding box visualization for detected text on each frame using OpenCV.
- Processed video input frame-by-frame, saving annotated output with detected text regions to a new video file.

ORGANIZATIONAL EXPERIENCE

Staff of Extracampus - External Department

2020 — 2021

Himpunan Mahasiswa Informatika ITB

Bandung, West Java, Indonesia

- Managing associations to communicate with 2 campuses, holding comparative studies between associations, collaborating with companies and successfully held 3 major event

SKILLS

Technical Skills:	
AI/ML & Computer Vision	YOLOv4/v8, OpenCV, EasyOCR, BGF-YOLO, Roboflow
LLM & AI Agents	LangChain, LangGraph, OpenAI API, Qdrant Vector DB
Backend Development	Python (FastAPI, Flask), Go (Gin), RESTful APIs
Database & Infrastructure	MySQL, PostgreSQL, Docker, WebSocket, RTSP
Cloud & Deployment	Railway, Vercel, Render, Docker containerization
Languages:	
Indonesian	Native (5/5)
English	Professional Working (3/5)

COURSES & CERTIFICATES

Programming for Everybody - Getting Started with Python (Coursera) Show	Jul 2020
Python Data Structures (Coursera) Show	Aug 2020
Using Python to Access Web Data Show	Aug 2020
Python Fundamentals for Software Development (Progate) Show	Aug 2021
Memulai Pemrograman Dengan Python (Dicoding) Show	May 2021
Belajar Dasar Visualisasi Data (Dicoding) Show	May 2021