

# Putu Gede Pradana Adnyana

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## Summary

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AI Engineer with 1++ years of experience in Machine Learning and LLM applications. Proven ability in developing and deploying high-performance object detection models, such as a Bottle Cap Color Sorter achieving under 35ms latency on edge hardware. Expertise includes implementing lightweight object detection architectures and leveraging run-time optimizations like quantization and pruning to ensure efficient model performance on resource-constrained devices.

## Education

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**Udayana University**, S.T. in Electrical and Computer Engineering – Bali, Indonesia Sept 2020 – Aug 2024

- GPA: 3.97/4.0 ([Transcript](#))
- Relevant Coursework: Calculus, Statistics, Big Data, Machine Learning, Computer Vision

**Mastering AI Bootcamp by Skill Academy**, in AI Engineering – Online Mar 2024 – June 2024

- GPA: 90/100 ([Transcript](#))
- Relevant Coursework: Python, Data Cleaning, Data Visualization, Statistics, Linear algebra and Calculus, Machine Learning, Deep Learning, CNN and Computer Vision, PyTorch, NLP and Transformer, MLOps

**Bangkit Academy by Google, Gojek, and Tokopedia**, in Machine Learning – Online Feb 2023 – June 2023

- GPA: 95/100 ([Transcript](#))
- Top 5% of 5,000+ participants.
- Relevant Coursework: Python, Data Analytics, Mathematics for Machine Learning (Linear Algebra, Calculus), Machine Learning, Deep Learning with Tensorflow, ML Deployment

## Experience

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**AI/ML Engineer (Contract)**, WWaste PTE. LTD – Bali, Indonesia July 2025 – present

- Built and deployed ETL pipelines for LLM context enrichment and insight generation, leveraging Langchain to transform large datasets into actionable business decisions.
- Developed and deployed time series forecasting (ARIMA, SARIMA, Prophet, LightGBM, XGBoost) for user waste generation, achieving RMSE of 1.2.
- Created and deployed object detection models for waste category (YOLO, mAP50 95%) and brand detection (zero-shot classification) on AWS SageMaker, including data collection and training.
- Integrated LLM observability (Langfuse), optimized REST API (FastAPI) with Redis caching, reducing token usage by 90% and response time by 99.7%.

**Machine Learning Engineer Intern**, PT. Adamata Indonesia – Tangerang, Indonesia Jan 2025 – June 2025

- Developed Bottle Cap Color Sorter software using Two Stage Object Detection, achieved latency under 35 ms with a 90% pick rate.
- Researched and implemented a Lightweight Object Detection model (Nanodet) for Bottle Cap Color Sorted.
- Optimized object detection with various run-time optimizations, including quantization and pruning, to improve performance on edge devices.
- Automated the deployment process on Raspberry Pi using Ansible, reducing deployment time by 50%.
- Gathered and Annotated datasets from the production line and trained models to improve accuracy and performance.

**AI Engineer Intern**, Ruang Guru – Jakarta, Indonesia Sept 2024 – Dec 2024

- Developed a web application for centralized various AI models, to be used by internal teams.
- Developed REST API for code generation and autocomplete and integrated with open-source coding assistant.
- Implemented CI/CD pipelines to automate the deployment process, reducing deployment errors by 25% and enhancing system reliability.
- Conducted performance testing and optimization, achieving a 30% reduction in response time for API endpoints.

- Documented the API endpoints and guides to set up the coding assistant, improving developer onboarding and usage.

**Product Development Intern**, X-Camp by XL Axiata – Jakarta, Indonesia

July 2024 – Aug 2024

- Contributed to integration of RTSP cameras for object detection and optimized multithreaded data processing using CUDA, improving system performance by 40% and enabling real-time analytics.
- Led data collection and labeling for training datasets for object detection.
- Configured MQTT protocols and integrated them with ThingsBoard, ensuring seamless data communication and system reliability.

## Projects

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### Teman Wisata

2025

Tourism recommendation system deployed on Biznet Gio Cloud.

- **Tools:** Python, Pytorch, MLFlow, Redis, Supabase, Scikit-learn, Fastapi, Docker, K3S, Typescript, Tailwindcss, Daisyui, Alpinejs, Vite

### SafeFlood

2025

Predictive flood monitoring and management system using Machine Learning and Google Earth Engine.

- **Tools:** Python, Google Earth Engine, Reflex, Leaflet JS, Scikit Learn, Tensorflow, Github Action

### Trash Object Detection - AI-Based Waste Audit and Assistant

2024

A Hackathon project that aims to help people to sort their waste properly.

- **Tools:** Python, OpenCV, Alibaba Cloud, Ultralytics, Streamlit

### UmMeals – Maternal and Child Nutrition App

2024

A Hackathon project that aims to help monitoring maternal and child nutrition.

- Achieved Top 6 in Microsoft Innovation Challenge 2024.
- **Tools:** Python, Microsoft Azure AI, Power BI, and Streamlit

## Skills

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**Programming Languages:** **Advanced:** Python; **Intermediate:** C++ , Javascript, Bash, SQL, PHP, Typescript

**Machine Learning Modeling:** Pytorch, Tensorflow, Keras, Scikit-learn, Huggingface Transformer, OpenCV, Opencvino, LiteRT, XGBoost, LightGBM

**Machine Learning Deployment:** Docker, Ansible, Google Cloud, Microsoft Azure, MLFlow, CometML, AWS Sagemaker, Vertex AI

**API and Web Development:** FastAPI, Flask, Streamlit, Gradio, REST API, Laravel, Django, Express JS

**Databases:** MySQL, PostgreSQL, SQLite, MongoDB, ChromaDB, Supabase, Redis

**Tools and Technologies:** Git, Github Actions, Linux

**Soft Skills:** Teamwork, Communication, Problem Solving, Adaptability, Time Management, Project Management

**Languages:** Bahasa Indonesia (Native), English (Professional Working Proficiency)