

Fauzan Ardhana Putra

AI/ML Engineer | Research, Systems & Deployment

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SKILLS

- **Languages:** Python, Rust, C, C++, Go, JavaScript, TypeScript
- **Machine Learning:** PyTorch, TensorFlow, Hugging Face Transformers, Unsloth, OpenCV, TensorRT, Triton
- **Systems & Infrastructure:** Docker, Kubernetes, Terraform, Google Coral Edge TPU, Unicorn Engine

EXPERIENCE

- Birru Sinergi Desain, IT Engineer** **2023 – Present**
- Built and deployed an IoT equestrian management system combining **real-time sensors** with a web portal for stable operations and **horse-health monitoring**.
 - Deployed a YOLO-based object-detection model on a **Google Coral Edge TPU** for **real-time embedded inference**.
 - Built a production pipeline using **computer vision** and **transformer models** to **extract spatial data** from **architectural CAD files** into structured records used for **cost estimation** (Rencana Anggaran Biaya, or RAB).
- Bank Mega Syariah, Intern** **Feb - Aug 2023**
- Resolved backend defects and implemented features for the **core banking system's** day-to-day reliability and operations.
- Binus International, AI Research Assistant** **Aug 2022 - Feb 2023**
- Curated **128,000 images** for a dataset and ran fine-tuning and evaluation experiments for Stable Diffusion model, providing evidence used to select which fine-tuning method to use.
- Telkomsel, Intern** **Feb - Aug 2022**
- Maintained cloud infrastructure and automated repeatable provisioning with **Terraform**, improving **deployment consistency**.

PROJECTS

- Indonesian Mathematical Reasoning with Qwen2.5-Math** | Python, PyTorch, Hugging Face, Unsloth Thesis
- Fine-tuned Qwen2.5-Math on our own dataset with **25,310 problem-solution Indonesian-language pairs**. Improved mean accuracy from **74.8% to 81.6%** across Indonesian translations of GSM8K and MATH and achieved the highest result among the evaluated Mistral 7B, Llama 3 8B, Qwen2.5-Instruct 7B, and base Qwen2.5-Math models.
- Deep Reinforcement Learning Agent for TrackMania 2020** | Rust, Python, PyTorch Project
- Built a **Soft Actor-Critic** agent using reverse-engineered game telemetry, virtual LIDAR observation, and dynamic memory hooks for real-time control.
- Diffusion Model for Proceduralosu! Beatmap Generation** | Python, PyTorch Project
- Trained a diffusion model with Rectified Flow to generate osu! beatmaps; generated maps were preferred in **62% of 52 informal comparisons** against **osu-dreamer** project.
- Cascaded Text-to-Image Diffusion Model** | Python, PyTorch Project
- Implemented a multi-stage diffusion pipeline inspired by **Imagen**, separating text-conditioned image generation from super-resolution to produce **1024 x 1024 images**.
- x86_64 Android Binary Emulator** | Rust, C, Unicorn Engine Project
- Built an emulator for executing and instrumenting **x86_64 Android native libraries** outside a standard Android environment, including support for **Bionic runtime behavior**.

AWARDS & RECOGNITIONS

- JuaraGCP, 1st Place, Cloud AI Study Jam by Google** **2024**
- BPJS Healthkathon, Top 10, CTF category** **2022**
- NAVER Japan, Recognized for authentication and account-lockout vulnerabilities affecting LINE** **2019 & 2020**

EDUCATIONS & CERTIFICATIONS

- BINUS International, Indonesia, B.Sc. in Computer Science, GPA: 3.3** **2019 – 2025**
- University of Nottingham, United Kingdom** **2023 – 2024**
- AWS Academy Graduate, Academy Cloud Foundations** **2021**