Farrell Laurensius Suryadi

0813-2048-0123 linkedin.com/in/farrellsuryadi/ farrellsuryadi.vercel.app farr.foxr@gmail.com

SUMMARY

5th Semester Computer Science student (3.71 GPA) Specializing in data science, data analytics, ML engineer, AI engineer. Currently Building an e-commerce recommendation system on the 500K-row UCI Online Retail II dataset, using Parquet data and processing with Polars. Built a chord classifier CNN, using self-recorded 1,000+ samples recorded in 2 months, achieving 70% accuracy with ~1-second latency. Reached quarter finals on Samsung Innovation Campus competition, and winner of CodeFest ICP national-level hackathon.

EXPERIENCE

2nd Place Hackathon Winner — Codefest.id Hackathon 14

MLOps, LLM Engineer *May 2025 - June 2025*

- Won 2nd place and a 6 Million IDR prize in the Codefest.id national-level hackathon.
- Integrated an LLM API to power the web app's core chatbot tutor feature.
- Implemented Web3 user-specific wallets for decentralized, on-chain storage of notes and documents.

Quarter-Finalist at Samsung Competition — Samsung Innovation Campus (SIC)

ML Engineer, Team Coordinator *Dec 2024 - May 2025*

- Contributed to training a high-accuracy CNN model on a 15k-image dataset, enabling low-latency, real-time classification of trash (organic, plastic, other) for an IoT system.
- Increased model accuracy by 30% by web-crawling and augmenting a custom image dataset.
- Created a Flask API to wrap the custom CNN model, enabling it to receive real-time ESP32 image inputs, routing live predictions to MongoDB, a Ubidots dashboard, and the ESP32's servo for sorting.

BNEC TOEFL TUTOR — BINUS Alam Stuera

TOEFL Tutor *May 2024 - Feb 2025*

- Paid to teach academic English and communication skills professionally in a university TOEFL prep program for 2 semesters (1 year)
- Helped 12+ students improve grammar understanding and test strategies, leading to higher TOEFL scores.

PROJECTS

Real-time CNN Chord Classifier

Technologies: ***Python, TensorFlow, Next.js, Flask, Librosa*** *Github*

- Self-recorded and labeled 1,000+ guitar chord audio samples over 2 months, to build a custom dataset (maj, min, maj7, min7)
- Engineered WAV signals into Mel Spectrogram, Chroma, and CQT features to train a CNN for chord recognition.
- Reached 70% accuracy on the custom dataset and 40% on real-world benchmarks (GuitarSet, IDMT-SMT).
- Built a web app for real-time chord prediction from microphone input with ~1-second latency.

Real-Time Image Captioning via Local GPU Inference

Technologies: ***Hugging Face Transformers, MoonDream, FastAPI, Next.js, NVIDIA CUDA, WSL2, Ollama*** *Demo Video*

- Built a real-time image captioning system running fully on a local RTX-3070, streaming live camera input and updating captions every 3 seconds via a Next.js frontend and FastAPI backend.
- Selected Hugging Face's MoonDream (SigLIP + Phi) for fast local captioning after researching Ollama, Qwen, and LLaVA-style VL models, achieving consistent sub-2-second inference on-device.
- Enabled GPU-accelerated inference under WSL by configuring CUDA-compatible NVIDIA drivers and environment tooling to bypass Windows GPU limitations.
- Optimized data transfer with binary multipart uploads (no base64/JSON), returning captions and inference time for real-time performance feedback.

EDUCATION

BINUS University — Alam Sutera

Undergraduate, Computer Science *2023 - Present*

- Pursuing a B.Sc. in Computer Science, Specializing in Intelligent Systems.
- Currently in 5th semester. GPA: 3.71 / 4.00.

SKILLS

Programming: Python (Pandas, NumPy, SQLAlchemy, Flask, scikit-learn, TensorFlow), JavaScript (React, Node.js, Express, React Native), C

Databases & Query: PostgreSQL, MySQL, MongoDB, Firebase, Supabase, Advanced SQL (CTEs, Window Functions, Query Optimization, Indexing)

ML & AI: LLMs, BERT, RAG, Multi-Agent Systems, Random Forest, BiLSTM, RNN, CNN, XGBoost

DevOps & Tools: Docker, Git, REST APIs

Languages: Indonesian (Native), English (Fluent).