UTANDRA NUR AHMAD JAIS

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Summary

Computer Science undergraduate at Universitas Indonesia with hands-on experience across machine learning, backend development, and large-scale data processing. Experienced in data validation and fraud analytics through a Bank Danamon internship, including migration validation across critical banking tables and graph-based analysis on ∼80M transaction rows. Built projects spanning NER, computer vision, multimodal learning, REST APIs, Django/Rust backends, and production-style software workflows. Strong in Python, SQL, PyTorch, Polars, PostgreSQL, FastAPI, Django, and Git-based development.

Education

Universitas Indonesia 2023 – Expected 2027

Bachelor of Science in Computer Science

- Relevant coursework: Software Engineering Project, Advanced Programming, Reinforcement Learning, Text & Information Retrieval, Artificial Intelligence, Fundamental Data Science, Database Systems, Data Structures & Algorithms, Operating Systems.

SMA Negeri 1 Balikpapan 2020 – 2023

High School Diploma in Natural Science

- **1st Place** – Provincial Round, National Science Olympiad (Informatics), organized by Puspresnas, Ministry of Education, Culture, Research, and Technology of Indonesia.

Experience

Data Analyst Governance Intern November 2025 – May 2026

Bank Danamon Indonesia

- Validated data integrity for **40+ critical tables** in a large-scale big data migration through row count, checksum, NULL-value, and duplicate-key reconciliation; peer-reviewed and documented validation across **∼150 tables (∼3 schemas)**.
- Co-developed a Python-based JSON reconciliation framework to validate nested JSON fields and built scripts to automate file-to-file comparison through sample-based checksum generation, reducing reliance on manual Excel reconciliation and supporting adoption by other interns.
- Built a transaction network graph from **∼80M rows** of banking data using **Polars** for memory-efficient processing, then prototyped a rule-based fraud-candidate detection module that surfaced suspicious account clusters for review by the fraud investigation team.

Lead Data Science & AI SIG March 2025 – Present

RISTEK Fasilkom UI

- Lead the Data Science & AI SIG, mentoring junior members through internal classes, project reviews, and competition preparation while coordinating technical direction with senior leads.
- Served as **PIC of the DSAI track for Pekan RISTEK**, RISTEK's annual one-month onboarding program; designed the end-to-end curriculum, coordinated senior student speakers, and led the selection process for **100+ applicants**.
- Contributing as a returning member of the **Datathon RISTEK problem-setting committee** after co-designing the previous edition, which attracted **700+ participants (300+ teams)** from universities across Indonesia.

Teaching Assistant February 2025 – December 2025

Fasilkom UI

- **Data Structures & Algorithms** (Feb – Jul 2025): Designed weekly lab problems and 4 programming assignments; built and maintained test cases for the autograding system.
- **Foundation of Programming 1** (Aug – Dec 2025): Prepared lab exercises and programming problems; graded weekly quizzes and reviewed assessments for accuracy and consistency.

Projects

SISIDANG | *Django, Python, Git Flow, SonarQube, TDD* *2026 – Present*

- Contributed to the continued development of an internal Fasilkom UI production system (sidang.cs.ui.ac.id) used to schedule and manage thesis defenses for undergraduate, master's, and doctoral students.
- Worked in an industry-style Scrum workflow with **3-week sprints**, sprint planning, daily standups, UAT, sprint reviews, and retrospectives; practiced TDD, merge requests, peer code review, and SonarQube.

MethaneSense | *Next.js, FastAPI, DINOv2, SAM3, Llama 3.3* *2026*

- Built an end-to-end web platform for real-time methane leak detection and segmentation from Optical Gas Imaging videos, integrating video upload workflows, CV inference services, and LLM-generated operational summaries.
- Implemented an AI pipeline using DINOv2 + Logistic Regression for frame classification, SAM3 for leak segmentation (86.7% mIoU, ∼245ms inference), and Llama 3.3 70B for operational insights.

GatherLove | *Rust (Rocket), SQLx, TypeScript, Docker, GitHub Actions, SonarQube* *2025*

- Built a donation campaign web application with a Rust Rocket microservice backend, separate authentication service, TypeScript frontend, Dockerized services, CI workflows, and SonarQube quality checks.
- Implemented the **Campaign module**: designed handlers, services, and repository layers following SOLID principles; wrote unit tests using `mockall` for repository mocking.

Data Science Competition Projects | *PyTorch, CatBoost, XGBoost, ELECTRA, DINOv3, SAM* *2024 – 2026*

- Built competition-grade ML systems across NER, computer vision, multimodal learning, fraud detection, and tabular modeling, including ELECTRA-based PII detection (F1-Micro 0.91464) and DINOv3-based traditional house classification (F1-Score 0.95).

Awards

- **1st Place — DataVers ANAVA #20 (2026)**
  Issued by Himpunan Mahasiswa Statistika FMIPA Universitas Gadjah Mada
  Built a NER pipeline for PII detection using ELECTRA-base with Pattern-Aware Matching and Top-k Confidence post-processing; achieved **F1-Micro 0.91464**, ranking **1st out of 5 finalist teams**.

- **2nd Place — IPFEST 2026 Hackathon (2026)**
  Issued by SPE ITB Student Chapter, IATMI SM ITB, and HMTM "PATRA" ITB
  Built MethaneSense, an AI-powered web platform for methane leak detection from Optical Gas Imaging video; integrated Next.js, FastAPI, CV inference services, segmentation, and LLM-generated insights.

- **1st Place & Best Project — Gelar Rasa Data Science Competition (2024)**
  Issued by Himpunan Mahasiswa Sains Data UPN Veteran Jawa Timur
  Built an end-to-end business optimization pipeline covering sales prediction, customer segmentation, and fraud detection; awarded both 1st Place and Best Project.

- **Other Notable Achievements (2025)**
  Selected UI Contingent GEMASTIK XVIII — multimodal online gambling promotion detection, Accuracy 0.97 and F1-Score 0.95; **2nd Place FindIT! Data Analytics** — COPPA compliance detection with CatBoost, ROC-AUC 0.8938; **2nd Place Sebelas Maret Statistics Data Science** — rainfall prediction with OCR-based extraction and CatBoost, MSE 15.34; **Finalist DSC LOGIKA UI** — DINOv3 + label denoising for noisy traditional house classification, F1-Score 0.95.

Skills

Programming & Data: Python, SQL, Rust, TypeScript/JavaScript, Dart, NumPy, Pandas, Polars, Scikit-learn

Machine Learning: PyTorch, XGBoost, LightGBM, CatBoost, Optuna, Ensemble Learning, Feature Engineering, Model Evaluation & Tuning

NLP, LLM & Computer Vision: Hugging Face Transformers, BERT, ELECTRA, NER, LLM Prompting, DINOv2/DINOv3, SAM, Multimodal Fusion, Segmentation

Software Engineering: Django, FastAPI, Rocket, REST APIs, PostgreSQL, Docker, Git, GitHub Actions, SonarQube, TDD, Code Review, Scrum