

# Glory Aditya Jauzaulbahi

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## PROFESSIONAL SUMMARY

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Biomedical AI/ML and Data Engineer specializing in Computer Vision, Generative AI, and MLOps. Proven track record of architecting scalable, end to end data and machine learning pipelines from building robust ETL workflows and distributed streaming architectures to cloud based model deployment. Committed to leveraging mathematical modeling and production grade engineering to eliminate complex data bottlenecks, reduce operational latency, and deliver high impact clinical and business solutions.

## TECHNICAL SKILLS

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**Languages:** Python, SQL.

**AI & ML Frameworks:** PyTorch, TensorFlow, Scikit learn, LangChain, ONNX.

**Data Engineering:** PySpark, Apache Airflow, NiFi, dbt.

**Computer Vision:** OpenCV, MediaPipe, Roboflow.

**MLOps & Infra:** Docker, FastAPI, Apache Kafka, MLFlow, Streamlit, Pytest, GitHub Actions.

**Tools & Cloud:** Git/GitHub, Linux (Ubuntu/Raspbian), Microsoft Azure AI.

## EDUCATION

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**Universitas Gadjah Mada** Yogyakarta, Indonesia

*Bachelor of Engineering in Biomedical Engineering*

*Graduate: Aug 2025*

- **Focus:** Biomedical Signal & Image Processing, Differential Equations, Linear Algebra, Biomedical Artificial Intelligence, Intelligence Systems.

**Pacmann AI**

Online

*AI/ML Engineering Bootcamp*

*Jan 2024 - March 2026*

- **Focus:** Data Visualization & Analysis, Probability & Statistics, Recommender System, Machine Learning Process & Deployment, MLOps, Natural Language Processing.

## PROFESSIONAL EXPERIENCE

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**Pusat Riset Sains Data & Informasi, BRIN**

Bandung, Indonesia

*AI Researcher Intern*

*Jul 2022 - Sep 2022*

- Engineered a robust computer vision pipeline utilizing MediaPipe to extract temporal features from video datasets, establishing an automated data flow for gesture recognition.
- Deployed and optimized models for edge computing, achieving real time hand motion classification (1 to 4 FPS) on Raspberry Pi 4 across varied environmental conditions.
- Documented research architectures and curated a scalable dataset of over 6,000 image sequences, streamlining internal knowledge transfer for future usage.

🏠 Project Repository

## PROJECTS EXPERIENCE

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**Meltion (Melanoma Detection) Android App - DTETI Capstone Team Project**

- Architected a scalable preprocessing workflow for over 10,000 diverse skin lesion images, implementing robust illumination correction and data augmentation strategies.
- Fine tuned a ResNet50 model, balancing the dataset to achieve 78% accuracy in multiclass detection while maximizing recall for critical diagnostic reliability.

- Collaborate backend integration and model deployment with backend member via Google Vertex AI, enabling seamless low latency inference for mobile end users.

### **Data Augmentation for Imbalanced Dataset with GANs - Undergraduate Thesis**

- Researched and developed custom GAN and VAE architectures to directly solve severe class imbalance and data scarcity in medical datasets.
- Synthesized high resolution medical data, benchmarking perceptual realism against ground truth distributions to achieve a production quality Fréchet Inception Distance (FID) score of 0.2249.
- Improved the diagnostic utility of synthetic data by retraining downstream classifiers, driving a massive improvement in F1 score to 96% over baseline models.

🔗 Project Repository

### **Biomedical Research Local RAG System**

- Architected a context aware RAG system using Llama 3.2 to extract actionable insights from unstructured biomedical literature, optimizing MMR and context window parameters.
- Containerized a scalable document retrieval microservice using Docker and ChromaDB, drastically reducing information retrieval latency.
- Implemented advanced vector search methodologies, accelerating data retrieval to under 2 seconds while maintaining strict semantic accuracy.

🔗 Project Repository

### **End to End Nutritional OCR & Data Extraction Pipeline**

- Developed an automated OCR data extraction pipeline using fine tuned YOLO and EasyOCR, eliminating manual data entry bottlenecks for noisy high glare packaging.
- Engineered a fuzzy Regex processing engine that successfully recovered 100% of missing packaging metadata via automated imputation and macronutrient validation.
- Deployed a production ready highly scalable dual interface system (Streamlit & CLI) capable of seamless batch processing (40+ images) with strict logic to eliminate hallucinations.

🔗 Project Repository

### **Distributed Medical Image Streaming**

- Architected an event driven microservices architecture utilizing Apache Kafka and Docker Compose to stream and process medical imagery in real time.
- Engineered a decoupled PyTorch consumer leveraging an optimized ResNet18 model to classify chest X rays, enabling asynchronous low latency pneumonia detection.
- Deployed an interactive Streamlit dashboard for live clinical monitoring and integrated automated Pytest validation suites to guarantee production grade pipeline reliability.

🔗 Project Repository

## **CERTIFICATIONS**

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### **Azure AI Fundamentals (AI 900)**

*Microsoft, Sep 2025*

- Validated understanding of computer vision workloads and cloud based AI deployment strategies.

### **DeepLearning.AI GANs Specialization**

*Coursera, Aug 2023*

- Advanced specialization in generative modeling, focusing on feature representation and image reconstruction techniques.

## **LEADERSHIP EXPERIENCE**

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### **UKM Perisai Diri, Universitas Gadjah Mada**

2020 to 2021

- **Head of Internal Division (2021):** Directed organizational workflows and optimized internal resource allocation.
- **Inventory Division Supervisor (2020):** Managed asset tracking systems and resource accountability for organizational activities.