

# Jonathan Alvios

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+62 852 1549 7116 | <https://github.com/Vios1231> | <https://jonathanalvios-portfolio.vercel.app>

## EDUCATION

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### Bina Nusantara University

Bachelor of Computer Science

Alam Sutera

Graduating in 2027

- GPA: 3.5
- Relevant Coursework: Machine Learning, AI Engineering, Data Analyst, Deep Learning, Data Scientist
- Organizations: HIMTI, Volleyball Club
- Research: “*Comparison of Traditional Machine Learning and Deep Learning Models for Tweet Sentiment Analysis*”, published at ICCSCI 2025 (Procedia Computer Science, Elsevier). [Github](#)

## PERSONAL PROJECTS

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### LLM-based Q&A Chatbot with Retrieval-Augmented Generation (RAG)

[Github](#)

Technologies: Python, Flask, OpenAI API, FAISS, LangChain

- Built an AI-powered chatbot capable of retrieving context-aware answers from document databases using **RAG architecture**.
- Developed Flask backend for real-time interaction and integrated OpenAI API for natural language generation.
- Implemented semantic search using FAISS to improve accuracy and retrieval speed.

### Multi Modal AI System for Automated Medical Report Generation

[Github](#)

Technologies: Python, Gradio, PyTorch, Hugging Face Transformers, Ollama (LLaMA3), ViT

- Built a multi-modal AI system capable of generating professional medical reports from chest X-ray images using Vision Transformer (ViT) and LLaMA3.
- Developed an interactive Gradio interface for real-time image analysis and report generation.
- Implemented Grad-CAM visualization to highlight critical regions in X-ray images for better interpretability.
- Integrated a locally running LLM via Ollama for secure, offline natural language report synthesis.

### FaceMe AI — Deepfake Image Recognition System

[Github](#)

Technologies: Python, TensorFlow, CNN, OpenCV, Flask

- Developed a **Convolutional Neural Network (CNN)** model to distinguish between real and AI-generated (deepfake/GAN) images.
- Implemented preprocessing, augmentation, and evaluation metrics (accuracy, precision, recall).
- Built Flask web app for user image upload and automatic real/fake classification.

### ScolioVis — AI-Powered Scoliosis Detection Web App

[Github](#)

Technologies: Python, TensorFlow, Flask, HTML/CSS, JavaScript

- Developed a deep learning-based web application for detecting scoliosis from X-ray images using a fine-tuned CNN (VGG16 backbone).
- Built a Flask backend for real-time image uploads and predictions, integrated with a TensorFlow model trained on medical image datasets.
- Designed a responsive front-end interface for visualization of detection results and model confidence scores.

## SKILLS & INTERESTS

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**Programming Languages :** Python, C, Javascript, Html, CSS, MySQL,

**Machine Learning & Data Science:** Scikit-learn, TensorFlow, Keras, Pandas, NumPy, Matplotlib, Natural Language Processing (NLP), Feature Engineering, Model Evaluation, Data Cleaning, Computer Vision,

**Deep Learning :** Convolutional Neural Networks (CNN), Recurrent Neural Networks (LSTM, GRU), Word Embedding (Word2Vec, GloVe), Data Augmentation, Transfer Learning

**LLM & AI Systems :** Retrieval-Augmented Generation (RAG), OpenAI API, LangChain, FAISS Vector Database, Prompt Engineering

**Web & Tools :** Flask, Streamlit, Git, Google Colab, Jupyter Notebook, VS Code, Postman, Docker, Gradio

**Soft Skills :** Analytical Thinking, Research Writing, Problem Solving, Team Collaboration, Attention to Detail

**Interests :** AI-related, Sports, Games, Movies, Valorant