

Ryan Adidaru

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EDUCATION

University Of Indonesia

Bachelor of Engineering in Computer Engineering

Jakarta, Indonesia

2026

EXPERIENCE

AI Staff of Autonomous Marine Vehicle, University Of Indonesia

Mar. 2024 – Present

University Of Indonesia

Jakarta, Indonesia

- Developed Python scripts and C++ scripts for Autonomous Navigation Algorithm in ROS2
- Developed ROS2 (Robot Operating System) package that organizes and integrate robot components into a unified systemr, using sensor calibration and custom autonomous algorithm, controlling each motors autonomously towards predetermined missions.
- Developed custom datasets for YoloV8 - YoloV11 models (Computer Vision) and trained it with custom made datasets with Roboflow
- Currently developing ASV's robotic simulation platform and algorithm using Unity3D with C# and ROS2
- Developed a python script for image processing based on the color of the intended objects using OpenCV, increasing the accuracy of object recognition up to 85 percent
- Explored ways to use GitHub collaboration in a team settings
- Developed a custom datasets for YoloV4-tiny model's (Computer Vision) and trained it with that custom dataset which gained accuracy up to 82 percent

Hardware Intern of EXERCISE FTUI, University Of Indonesia

Oct. 2023 – Jan. 2024

University Of Indonesia

Jakarta, Indonesia

- Developed a platform for mushroom cultivation using IOT that produces temperature and humidity data
- Developed a software to maintain the mushroom automatically using linear regression's machine learning model that predicts optimal temperature and humidity for current settings which increases the productivity to 75 percent
- Further development of the software by utilizing AI Assistant-like models using character.ai unofficial api and google text-to-speech

PROJECTS

RoR — RewrittenOnRust | Rust, Machine Learning, Ollama, VectorDB (Qdrant)

Mar. 2025 – Present

- Initiated and currently developing open-source project in Rust that applied popular LLMs stack, such as RAG using Qdrant as VectorDB and MCP, also i'm using ollama as backend endpoint for LLM model and Embedding model

asvsim | Python, C++, C#, Unity

Dec. 2024 – Present

- Forked and contributed to open-source ASV robotic simulation and currently still developing autonomous system to integrate in ROS2

yolo.cpp | CUDA, C, C++, Neural Networks

Jul. 2024 – Dec.2024

- Developed an open-source project for a vision model from scratch ranging from C++ with only using omp.h as an attempt to maximize the CPUs to CUDA for GPU Optimization

amadeus | NLP, Groq, Llama 3.1

Jul. 2024 – Present

- Developed a personal assistant with langchain that can retain memory from previous conversation with the users with combined APIs from Groq for the LLMS and Deepgram for text-to-speech.

Mitsuki | Python, Streamlit, Llama 2.70b, NLP

Jan. 2024 – Feb. 2024

- Trained Llama 2 with custom datasets, to achieve desired personallity for the chatbot and deploy the chatbot with streamlit
- Made and used my custom dataset to train the Llama 2
- Implemented GitHub OAuth to get data from user's repositories

Trained YOLOv4-Tiny | Computer Vision, YOLOv4-tiny, OpenLabelling, Google Colab

Jan. 2024 – Jan. 2024

- Developed a customized YOLOv4-tiny model using my datasets that i created using AyamBawang-dataset which consists of 300 labeled images of indomie

- emotionDetector** | *Computer Vision, Machine Learning, Google Colab* Nov. 2023 – Nov. 2023
- Developed a customized machine learning models that can recognizes human emotions, starting from happiness to fear, results of Independent Research that i conducted
- Digital Mouse With Hand Recognition** | *Computer Vision, Machine Learning, Google Colab* Oct. 2023 – Oct. 2023
- Developed a customized machine learning models that can recognizes Hand gestures that can be converted to digital mouse with certain gestures, pinching for left click, etc. results of Independent Research
- WaifuAI** | *NLP, Machine Learning, Google Colab* Oct. 2023 – Oct. 2023
- Utilized CharacterAI unofficial API to build AI Assistant that can act like Hu-Tao from Genshin Impact and can speak with help from text-to-speech from google, results of Independent Research
- SEA Countries Education Analysis** | *Visualization, Kaggle, Machine Learning, Google Colab* Nov. 2023 – Nov. 2023
- Visualized data of SEA Countries in term of education with custom datasets from Kaggle, results of Independent Research

CERTIFICATES

IBM Certified Applied AI Professional
Google Advanced Data Analytics
Google Foundations of Data Science
Google Get Started With Python
Google Advanced Data Analytics Capstone
Google Go Beyond the Numbers: Translate Data into Insights
Google Regression Analysis: Simplify Complex Data Relationships
Google The Nuts and Bolts of Machine Learning
Google The Power of Statistics
Sololearn Python Intermediate
Udemy Web Developer Bootcamp

TECHNICAL SKILLS

Languages: Rust, Python, C/C++, JavaScript, HTML/CSS, SQL, CUDA
Developer Tools: Git, Jupyter Notebooks, Google Colab, VS Code, Visual Studio, Kaggle, Ubuntu 22.04, neovim, vim
Libraries: pandas, NumPy, Matplotlib, OpenCV, ROS, ROS2, YOLO Architecture