Novebri Tito Ramadhani

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I am currently at sixth semester student of Mechatronics Engineering Education study program from Yogyakarta State University. I am a discipline and hardworking person, and I'm interested learning a new things to improve my abilities and experience. I have experience with aerial robotics and machine learning such as Tensorflow, Pytorch, Scikit-Learn, ROS, and Python. I'm interested in machine learning, robotics, and automation technology

WORK EXPERIENCE

AI Engineer | Hybrid Bandung

PT Telekomunikasi Indonesia (Persero) Tbk February 2024 - Present

- **Collaborated** with a 14-person team to **developed and deployed** automation system for module creation and review with GPT-4o and Llama 3.2, integrated via FastAPI for efficient backend API management. Utilized by 1406 corporate workers, reducing manual workload by **40%** over 6 months (June–November).
- **Implemented** advanced RAG pipeline, increasing factuality of responses from **20%** to **90%**, improving user trust and accuracy in generating module learning content.
- **Developed** avatar generation model for video learning using Wav2Lip and Sf3d, enabling automated lip-sync and realistic avatar movements, cutting manual editing time by **50%**.
- **Designed and deployed** face recognition model with GhostFaceNet for online meeting attendance, achieving **98%** accuracy during validation and testing phases.

Freelance Data Scientist | Remote Yogyakarta

Self-employed Jan 2024 - Present

- **Analyzed feature correlation** in bank client data and developed a **propensity model** using **Gradient Boosting** and **Logistic Regression**, achieving **93%** accuracy in predicting the likelihood of individuals applying for deposit products.
- **Processed and filtered 3M+** rows of cybersecurity attack data (2021–2023), categorized by IP destination and ISP, improving data readiness for anomaly detection analysis.
- **Developed forecasting models** for bond letter data (June 2022 – July 2024) using **LSTM** (**MSE 0.3**) and **Random Forest** (**MSE 0.07**), enabling accurate trend prediction for financial planning.
- **Preprocessed and analyzed** EEG data to identify channel correlation; built **Random Forest** and **XGBoost** models to predict grip strength and user context (VR vs. real-world), achieving **96% accuracy**.

PROJECTS

MARSHALL App

- Created an automation system for learning module creation and review using **GPT-4o** and **Llama 3.2** with a **RAG pipeline**, improving accuracy for domain-specific topics and enhancing the review process.

Computer Vision Guided Autonomous Drone

- Developed **object detection** using **YoloV3s with TensorRT** as the inference engine on Jetson Nano to track pickable objects and detect obstacles.
- Designed an odometry system for the drone with the **ROS framework**, achieving **90% pick accuracy** in real-world testing using barometer to track velocity and altitude of drone.

Computer Vision Guided Autonomous Drone

- Built a **denoising autoencoder model** to remove image noise using **PyTorch**, achieving an MSE loss of **0.0019.**

ORGANIZATIONAL EXPERIENCE

UNY Robotics Yogyakarta
Autonomous Drone Developer, Vertical Take-off and Landing Division Jul 2022 – Sep 2024

- Developed scripts for **autonomous drones** with capabilities to **detect objects** and fly both **indoors and outdoors** autonomously, utilizing **ROS** and computer vision frameworks.
- Served as **Lead Programmer**, contributing to the team's success in securing **1st Runner-up at KRTI Regional Level (2023)** and achieving recognition at **FIRA International Level** competitions.

EDUCATION

Yogyakarta State University — Bachelor of Education in Mechatronics Engineering
GPA: 3.73/4.00 | Expected Graduation: 2025

ADDITIONAL

Technical Skills: **Deep Learning** (TensorFlow, PyTorch, Scikit-learn, TensorRT), **Machine Learning** (Gradient Boosting, Random Forest, XGBoost), **Backend Development** (FastAPI, Flask, Docker), **Data Analysis & Visualization** (Pandas, NumPy, Tableau), **Embedded Programming** (ROS, Arduino IDE), **Computer Vision** (OpenCV) **Predictive Modeling**, **Statistical Analysis**.

Languages:

- Native in **Indonesian**
- Advanced in **English** (UNY Protefl score 527/670)

Certifications & Training:

- Tensorflow Developer Certificate
- Bangkit Academy machine learning course by Google, GoTo, and Traveloka 2023

Awards:

- **Outstanding Student Award** in the Field of Reasoning (2023, 2024).
- **1st Runner-up** FIRA Air Simulation Technical Challenge (2022).
- **1st Runner-up** FIRA Air Simulation Cup (2022).
- **1st Runner-up** Indonesian Aerial Robotics Contest Regional B (2023).
- **Top 8** Indonesian Aerial Robotics Contest National (2023)

REFERENCES

Name : Sigit Yatmono, ST., M.T.
Position : Head of Mechatronics Education Engineering Study Program
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