Rizky Ardi Maulana

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Education

Bandung Institute of Technology	Bandung, Indonesia
B.Eng. Electrical Engineering, GPA: 3.62/4.00 (Cum Laude)	Aug 2017 – Oct 2021

- 1st winner of mobile soccer competition at the Indonesian Robotic Contest 2019 (Regional Stage)
- 4th Winner of mobile soccer competition at the Indonesian Robotic Contest 2019 (National Stage)

Work Experiences

CAD-IT Consultant (Asia) Pte Ltd	Bandung, Indonesia
Computer Vision Engineer	Jul 2021 – present

- Develop web application using a technology stack that encompasses Golang, Python, PostgreSQL, Redis, RabbitMQ, Minio, gRPC, Grafana, Prometheus, and Docker.
- Conducted research, designed, and executed a scalable application for object detection, defect identification, action recognition, and video analytics
- Conducted research and applied containerization through Docker for the development and deployment of computer vision applications.
- Designed and deployed computer vision applications as services with both REST and gRPC interfaces
- Explored the optimization of deploying computer vision applications using Onnx and TensorRT

Xirka Silicon Technology	Bandung, Indonesia
Embedded Engineer Intern	Jun 2019 – Aug 2020

- Researched the capability of Real Time Operating System in Xirka Ardunesia Microcontroller
- Implemented Real Time Operating System in Xirka's Smart Meter Project

Institut Teknologi Bandung	Bandung, Indonesia
Microcontroller System Laboratory Assistant	Mar 2021 – Jul 2021

- Served as a content writer for the Microcontroller System Laboratory course module introduced in 2021
- Provided supervision and guidance to students in the Microcontroller System Laboratory, aiding their understanding and success in the course

Computer System Architecture Laboratory Assistant Coordinator	Sep 2020 – Dec 2020

- Tasked with preparing, planning, organizing, and executing the Computer System Architecture Course

Problem Solving using C Laboratory Assistant	Jan 2020 – May 2020

- Provided supervision and guidance to students in the Problem Solving in C Laboratory, helping them understand the course and successfully pass

Projects

Train Booking System	2023

- Designed a simple system for online book and buy train tickets. Inspired by KAI's booking system (Indonesian Railways Company).
- Developed essential functionalities, including train search and booking, seat selection, ticket management, and user management. Achieved this using the Gin web framework in Golang, implemented Redis for caching, employed PostgreSQL as the database, and utilized Next.js and React Typescript for the user interface.

Personal Protective Equipment (PPE) Inspection	June 2022

- An automated computer vision system designed to identify whether a worker is appropriately equipped with the required Personal Protective Equipment (PPE) for a specific task or environment. The system examines five safety items, including helmets, safety glasses, masks, vests, safety gloves, and safety shoes.
- The inspection records are stored in the database and can be seen on an online dashboard.
- The inference engine is deployed on a Nvidia Jetson Nano while the remote server is deployed on Heroku.

Moving Asset Tracking	Jul 2021

- An Internet of Things (IoT) solution designed to track and monitor motorcycles. This system collects a variety of data, including location, speed, acceleration, gyroscope readings, driver details, fuel level, battery voltage, and ignition status. This data is transmitted to a server via MQTT and stored in a database and presented on a dashboard.

PCB Defect Detection and Classification	Dec 2020

- PCB Defect Detection and Classification using OpenCV and machine learning approach.

Organizational Experiences

Dagozilla Mobile Robot Team   Bandung, Indonesia
Head of Electrical Division   Jul 2019 – Oct 2020
- Responsible in electrical research and development of Dagozilla's third generation autonomous mobile soccer robot

Electrical and Embedded Engineer   Sep 2018 – Jul 2019
- Designed and manufactured hardware of Dagozilla's Soccer Robot and Telepresence Robot
- Programmed the firmware of the Dagozilla Soccer Robot and Telepresence Robot to integrate the sensors and actuator

Skills

Languanges   : Indonesian (Native), Javanese, English
Technical Skills : Web Development, C, C++, Golang, Python, Typescript, OpenCV, PostgreSQL, MongoDB, Redis, RabbitMQ, Nginx, Docker, Pytorch, Onnx, TensorRT.
Interest   : Software Engineering, Machine Learning, History, Badminton