

RESHA DWIKA HEFNI AL-FAHSI

ROBOTICS AND MACHINE LEARNING ENTHUSIAST

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ABOUT ME

Technical Skills C/C++, Python, Computer Vision, Robotics, Deep Learning
Languages Indonesian, English

WORK EXPERIENCE

Neurabot

AI Engineer Intern

Yogyakarta, Indonesia (December 2020 – Now)

- Developed an auto-tagging system for medical imaging.
- Programming Language: Python
- Software, Tools and Libraries: PyTorch, OpenCV, scikit-learn

UGM AI CENTER

Research Assistant

Yogyakarta, Indonesia (June 2019 – December 2020)

- Involved in many Robotics, Computer Vision and Machine Learning Projects:
 - Developed back end of automated machine learning pipeline for data scientist to increase their productivity.
 - Developed service robot platform.
- Programming Language: Python, C++
- Software, Tools and Libraries: Docker, Flask, PyTorch, scikit-learn, OpenCV, ROS, Gazebo, RViz, Qt

Honeywell Laboratory at Department of Electrical and Information Engineering UGM

Research and Development Intern

Yogyakarta, Indonesia (January – May 2019)

- Developed a dashboard design for face recognition system in Honeywell Laboratory of Department of Electrical and Information Engineering UGM.
- Programming Language: Python
- Software, Tools and Libraries: TensorFlow, OpenCV, Dash by Plotly, Qt

Department of Electrical and Information Engineering UGM

Lecturer Assistant

Yogyakarta, Indonesia (August 2017 – January 2018)

- Lecturer Assistant for Basic Programming Course.
- Programming Language: C
- Software, Tools and Libraries: Repl.it

Gadjah Mada Robotic Team

Senior Programmer Team Lead

Yogyakarta, Indonesia (November 2016 – October 2019)

- Senior Programmer and Team Leader for University's Robotic Research Team in Wheeled Soccer Robot Division:
 - Designed robot software architecture using ROS framework.
 - Implemented RRT* algorithm for the robot path planning.
 - Designed robot communication system, consist of basestation, local database using hashtable and peer to peer communication using TCP unicast and UDP multicast.
 - Designed decision-making algorithm for autonomus robot using FSM.
 - Implemented robot localization algorithm using Kalman Filter and Particle Filter.
 - Developed ball detection algorithm.
 - Implemented Artificial Neural Network in C++.
- Programming Language: Python, C++
- Software, Tools and Libraries: ROS, Qt, OpenCV, Protobuf, Boost

COMPETITIONS AND PERSONAL PROJECTS

GUGEN Competition

(December 2019)

- Developed a novel text-entry system for visual impaired people.
- Top 6 for Grand Prize and Excellence Award from P-Ban.Com Corp.

AI-JAM Japan 2019

(December 2019)

- Developed a novel text-entry system for visual impaired people.
- Got Gold award from AI-JAM Japan.

MyQLaNet

(November 2019 – Now)

- MyQLaNet is an end-to-end deep learning platform for macula detection.
- Developed the platform using PyTorch and Qt.

Indosat Ooredoo HackData

(November 2019)

- Developed an IoT platform for measuring and maintaining electrical system.
- Top 10 Finalist from PT Indosat Ooredoo.

The 21th International Electronics Symposium (IES)

(September 2019)

- Presented two papers about face recognition and vehicle counting in a poster presentation and exhibition session.
- Got best paper award.

NightOwl

(August 2019 – September 2020)

- NightOwl is a robotic platform for wheeled service robot.
- Developed the robotic platform using ROS based on Python and C++ programming language.

OpenVINO Hackathon

(August 2019)

- Developed a deep learning platform for early detection of sick livestock.
- Got 3rd place award from PT Synnex Metrodata Indonesia.

DILo Hackathon Festival Yogyakarta

(August 2019)

- Developed an IoT platform for measuring water usage.
- Got 2nd runner up place award from DILo (Digital Innovation Lounge).

Laboratory Attendance Dashboard Website Based on Face Recognition System (January – May 2019)

- Developed a dashboard website for face recognition system in Honeywell Laboratory of Department of Electrical and Information Engineering UGM.
- Face recognition system and dashboard website was built using TensorFlow and Dash by Plotly respectively.

Wheeled Soccer Robot Contest of Kontes Robot Indonesia Regional 3

(April 2018)

- Developed a wheeled soccer robot platform.
- Got 3rd place and best strategy award from Kementerian Riset, Teknologi dan Pendidikan Tinggi Republik Indonesia.

Fukurō

(November 2016 – October 2019)

- Fukurō is a wheeled soccer robot platform based on RoboCup Middle Size League.
- Developed the robotic platform using ROS based on Python and C++ programming language.

EDUCATION

Universitas Gadjah Mada

Yogyakarta, Indonesia (2016–2020)

- Bachelor of Electrical Engineering
- GPA: 3.48