

Miftahul Anwar

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EDUCATION

2017-2021 **Politeknik Elektronika Negeri Surabaya**

Bachelor of Engineering in Computer Engineering

Activities:

Robotic researcher at EEPIS Robot Soccer Team (EROS) 2018-2021

PROJECTS

2020 **Descotin (Deteksi Suhu for Covid-19)**

This device can detect whether a person wearing a mask or not, measure human temperature, and send the report to website. I was responsible for the Graphical User Interface and mask detection algorithm.

video demonstration: <https://intip.in/descotin>

Skills: OpenCV, Linux, QT GUI, C++, Rest API

Archery Pose Estimator

This software has an ability to detect and analyze human pose, then measure the error between current pose and your bookmarked pose.

video demonstration: <https://intip.in/ArcheryPoseEstimator>

Skills: OpenCV, Linux, QT GUI, C++, ROS

2021 **Portable External Examination Device**

PEED helps you to stream your ear conditions, lungs and heartbeat, body temperature, and many more over the internet to your doctor. PEED helps you do a quick examination in case you can't immediately meet your doctor.

Video demonstration: <https://intip.in/projectpeed>

Skills: OpenCV, Linux, QT GUI, C++, Rest API

NMEA Monitor

NMEA Monitor can listen data through TCP with NMEA standard, visualize it, record and replay screen, and upload & download a recorded video(s) to disk.

Video demonstration: <https://intip.in/projectnmea>

Skills: OpenCV, QT GUI, C++, Socket Programming, FFmpeg

An Indoor Localization System on EROS Humanoid Robot Soccer (Final Project)

In this final project, I implemented a Particle Filter algorithm to help the robot estimate its position and orientation based on landmarks information. The landmarks are detected using Convolutional Neural Network.

Skills: OpenCV, QT GUI, C++, Python, TensorFlow, Google Colab.

AWARD

May 2018	Best Design in Regional Level Indonesian Robot Contest 2018 Humanoid Soccer League Ministry of Research, Technology, and Higher Education PPA Scholarship Awardee Ministry of Research, Technology, and Higher Education 1st Place in Regional Level Indonesian Robot Contest 2018 Humanoid Soccer League Ministry of Research, Technology, and Higher Education
July 2018	1st Place in National Level Indonesian Robot Contest 2018 Humanoid Soccer League Ministry of Research, Technology, and Higher Education
May 2019	PPA Scholarship Awardee Ministry of Research, Technology, and Higher Education
June 2019	Best Strategy in National Level Indonesian Robot Contest 2019 Humanoid Soccer League Ministry of Research, Technology, and Higher Education 2nd Place in National Level Indonesian Robot Contest 2019 Humanoid Soccer League Ministry of Research, Technology, and Higher Education
July 2019	Round of 16 in Robocup Humanoid Kidsize League 2019 Robocup Federation
September 2020	Adaro Scholarship Awardee Yayasan Pelayanan Kasih AA Rahmat (YPKAAR)
October 2020	3rd Place In Regional Level Indonesian Robot Contest 2020 Humanoid Soccer League - Sprint Category National Achievement Center 4th Place in Regional Level Indonesian Robot Contest 2020 Humanoid League - Ball Dribbling Category National Achievement Center
November 2020	4th Place in National Level Indonesian Robot Contest 2020 Humanoid League - Sprint Category National Achievement Center 1st Place in National Level Indonesian Robot Contest 2020 Humanoid League – Ball Dribbling Category National Achievement Center
May 2021	Product Copyright Award (of our product called Descotin) Directorate General of Intellectual Property

ORGANIZATION EXPERIENCE

2018 - 2020 **EEPIS Robot Soccer Team (EROS) PENS as Programmer**

- Developed Graphical User Interface to wirelessly monitor robot behavior
- Maintain and improve robot decision making algorithm
- Maintain and improve robot teamwork algorithm
- Developed robot localization system
- Developed new image processing algorithm

2019 - 2020 **EEPIS Robot Soccer Team (EROS) PENS as Team Leader**

- Manage member of research
- Create a roadmap of research
- Write conference paper as research report

WORKING EXPERIENCE

Aug - Nov 2021 **PT. Bluebird Group Tbk – Internship as IoT Engineer**

- Reverse engineered the IoT firmware
- Developed neural network model to identify GPS Jammer
- Developed an android app to run GPS Jammer neural network model and send a notification over MQTT

Skills: C, RTOS, IoT, TensorFlow, Google Colab, Android, MQTT, Git.

Dec 2021 - Now **PT. Zona Edukasi Nusantara (Zenius) – Problem Generator Developer**

- Write a Clojure code to create a school problem / quiz based on the requirements from tutor. The code will turn tutor requirements into a json file that will be consumed by ZenPractice
- Developed and maintain webservice features related to problem producing mechanism using Clojure and ClojureScript
- Developed a Clojure library to helps other Problem Generator Developer generate school subject. The goal of this library is to replace our current web-based problem generator
- Create a Clojure app that allow the tutor turns some keywords into a graph, infographics, LaTeX format, equation, various school quiz format, etc. The goal is to speed up their process of creating school quiz

Skills: Clojure, ClojureScript, LaTeX, SVG, HTML, REST API, Git.