RENARDI'S PORTFOLIO

Computer Engineer

ZAKA-ENT

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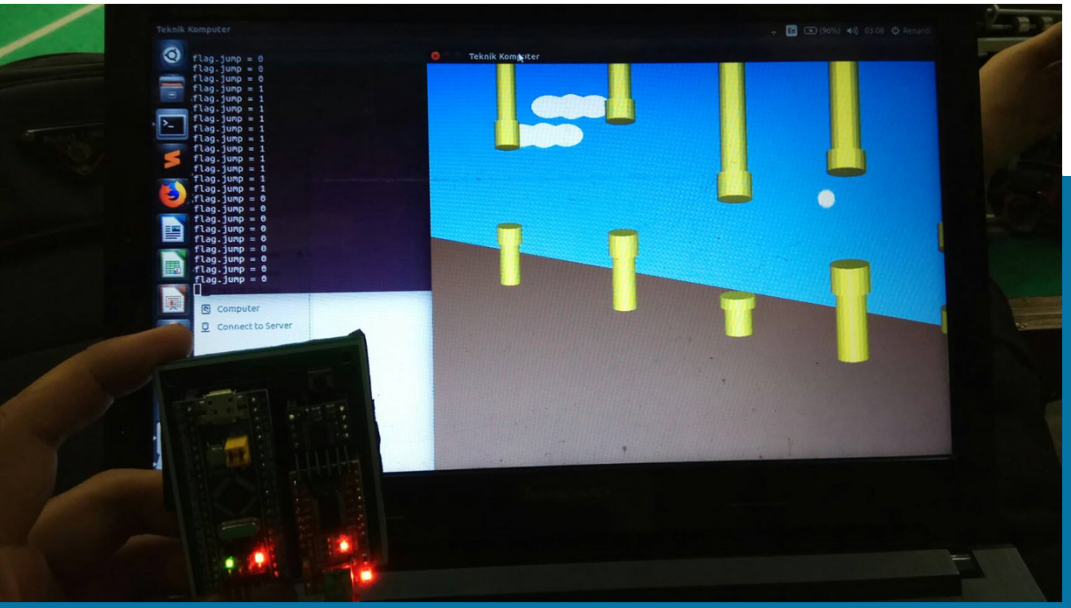
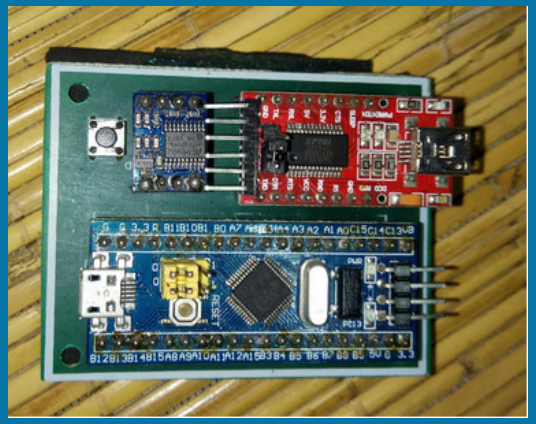
EEPIS News and Network Team





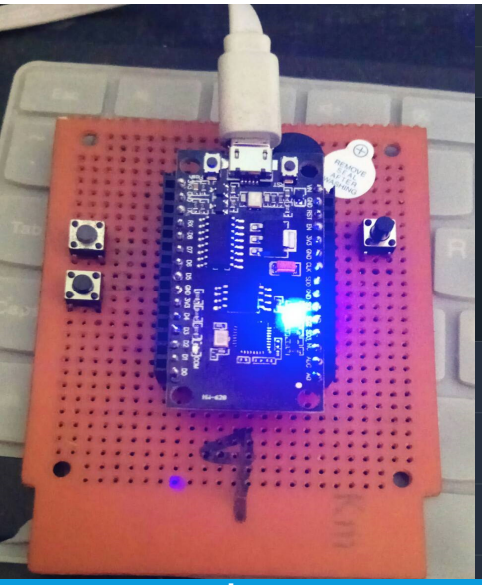
FLAPPY BIRD GAMES

Abstract- It is a Computer game that built on Linux using OpenGL Library. This game aims to create human computer Interaction. The interaction has been built using Embedded Remote Control that will send the data to the pc Via Serial Comm. The game play is very simple, you just move Up and Down the remote control to influent the character movement on that game (Yellow Bird).

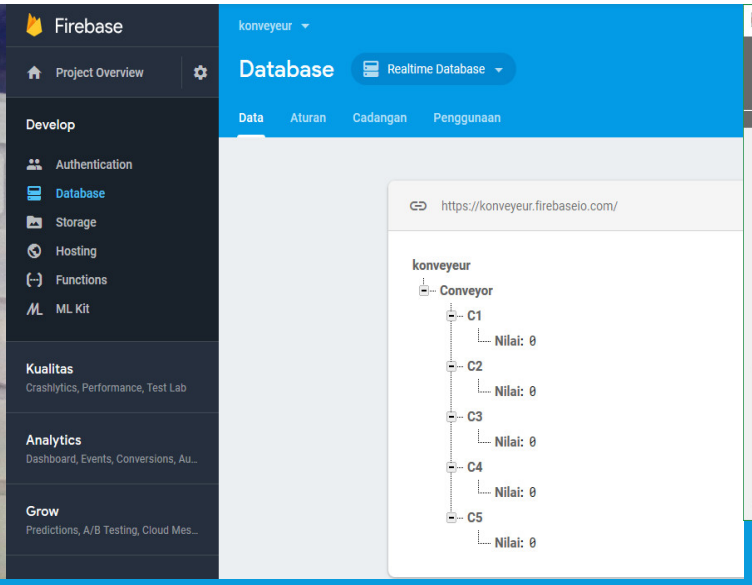
Remote Control Materials:

1. ARM STM32F1.
2. Gyro sensor GY25
3. FTDI (USB TTL)
4. DIY Circuit BOARD.

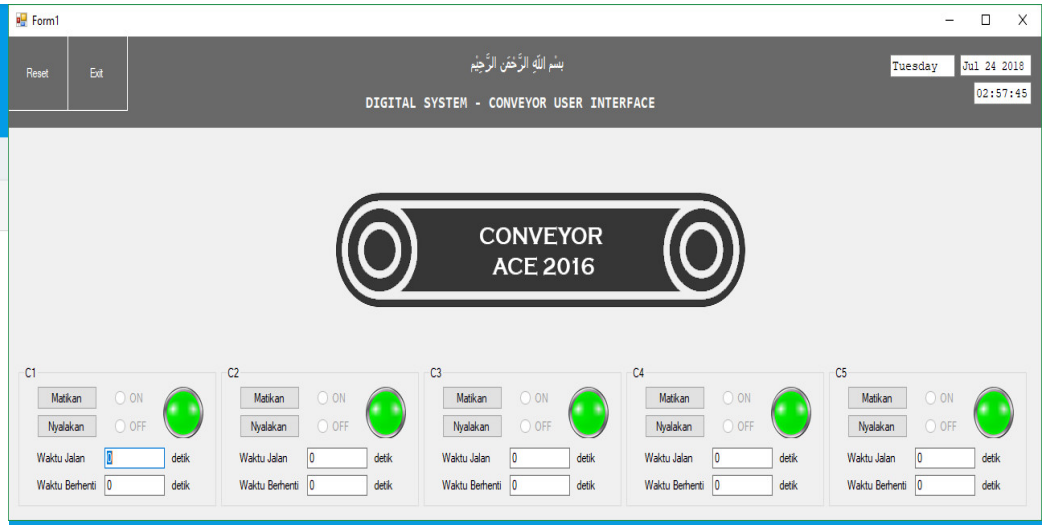
IOT PROJECT PROTOTYPE CONVEYOR CONTROL



Hardware



Database

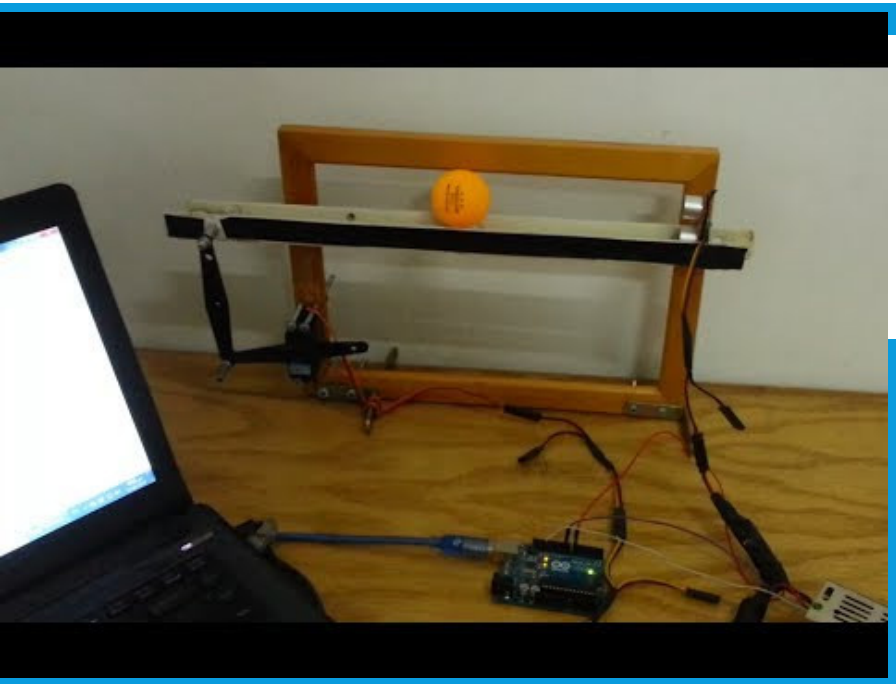


GUI

Abstract- The product inside factory has several steps before the product can be sell. The step is forcing the product to crossing stations by stations helped from conveyor belt that Run continuously. In traditional way, Each of the conveyor will be operated by employee, so they might be false, misconception with each other, or slow respond when any problem occurs. This can bring time losses. This is our method take placed. This device will control conveyor Operational in a industry and send it to central GUI via Real-Time Databases, so operator can Control all of the conveyor in one single system.

Hardware Materials:

1. Node MCU ESP32
2. PCB Dot Matrixs.
3. Buttons.
4. 5V Buzzer.



 # This image isn't belong to me (I found it in google) but this is 100% same with my lecturer project in my campus.
 # You can download my code from github that I guarantee the code is created by me.

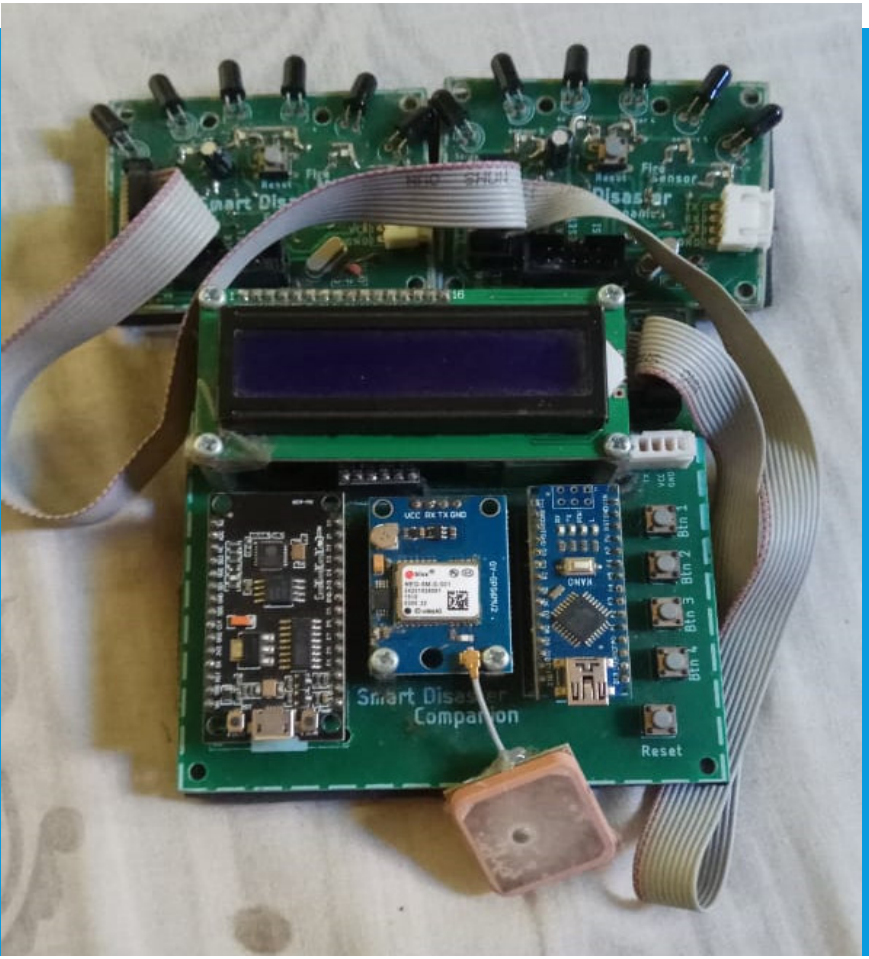
Hardware Materials:

1. Arduino Uno
2. Servo
3. Ultrasonic Sensor
4. Small Ball

BALL BALANCING WITH FUZZY LOGIC

Abstract- This is my project that aims for controlling the ball above the stick, so the ball keep on the center whatever the disturbance come in. The special thing of fuzzy logic is all of the control parameters using heuristic model, so it is close to the human preception. The output data will be sent on the laptop for Monitoring.

SMART DISASTER COMPANION



Abstract- This project is aimed to provide early warning system for fire. it is an IOT system that has connection to the server, so users can know where the fire will be occurred. The embedded device consists of master and slave devices. The slaves responsible for fire detection, but the master device will responsible for location estimation (GPS), sending data to the database (firebase), and activate the buzzer. The communication between master and slave is using I2C communication.

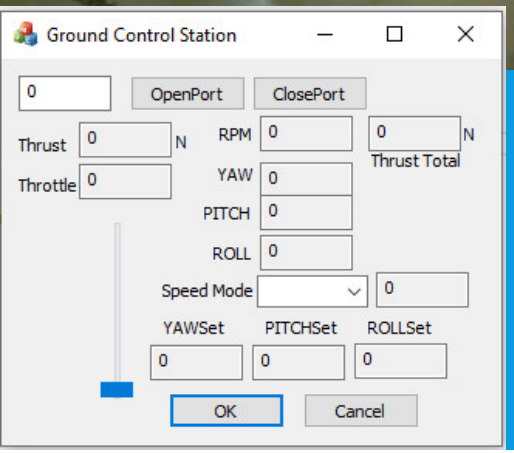
Master Materials:

1. Arduino Nano
2. GPS UBLOX NEO 6M
3. Node MCU
4. Buttons
5. LCD 16x4

Slave component:

1. Black Photodiode
2. Atmega 8 Smd

DRONE QUAD COPTER

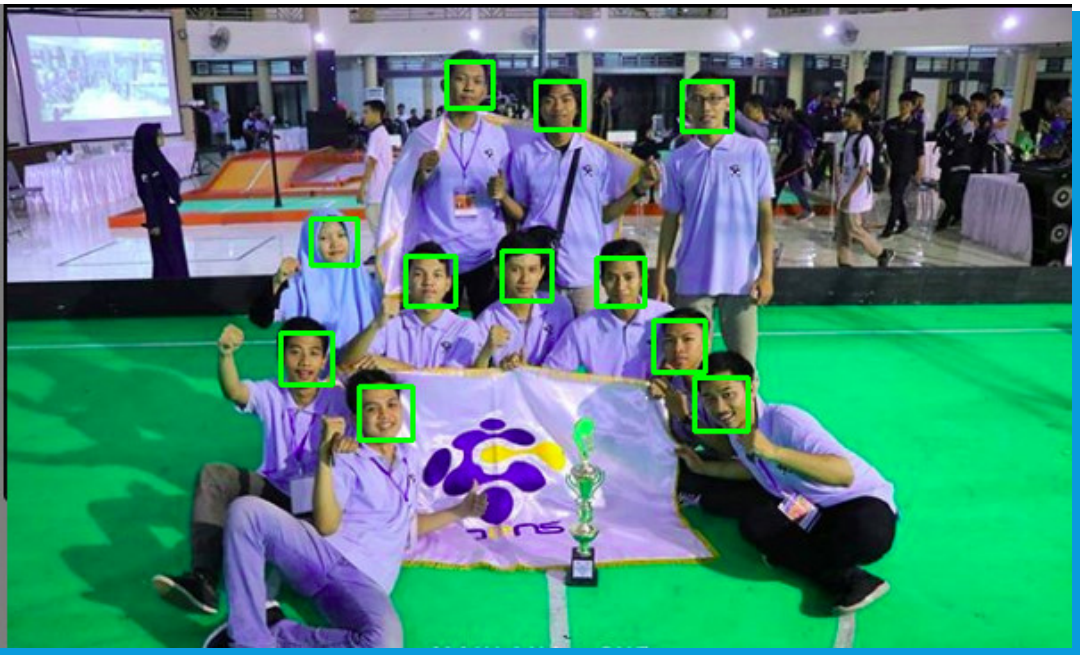


Abstract- This is Drone Quad copter that been build by me. This drone is remote control flight robot. The communication between Ground control station (GCS) and the drone is using radio wave (NRF module). There are 4 brushless motors which is attached. The drone will be stabilized by Gyro Sensors (GY-25). The flight controller has created using PID Control inside ARMstm32f1. The GCS have been made using Visual Studio.

Flight controller:

1. ARM Stm32f1
2. 4 Brushless motors
3. Gyro GY-25
4. 5V Buzzer
5. NRF24L01

FACE DETECTION



Abstract- I was tried to recognized the faces of my team. That photo was taken after My Team got 2'nd placed regional robot soccer on wheeled division in Kontes Robot Indonesia (KRI). That event was held on Mataram University on 2019. The face recognition uses Machine Learning. Especially, it is using HAAR Cascade. That program running with python under Linux Environment.

MY FINAL PROJECT

DYNAMIC OBSTACLE AVOIDANCE FOR ROBOT SOCCER

Abstract- This is my experiment. That was the robot that run on the simulation that will avoid several moving obstacles autonomously. The program have been built under Robotic Operating System Inside Linux.

If you want know more, you can refer to this link. I'll provide my demo video.

https://drive.google.com/drive/folders/1bJey6CDPUJZfSEXTK_HOaEi31jUoq3lP?usp=sharing

Some of my research is form of research paper that you can access on my researchgate.net.
https://www.researchgate.net/profile/Renardi_Priambudi

This is the sample video that I participate on Kontes robot Indonesia (KRI). This competition was held by Ministry of Research, Technology and Higher Education of the Republic of Indonesia (KEMENRISTEKDIKTI). All of that robot is running autonomously without human interfere.
https://youtu.be/_XC6nVMEolg
(Ersow has Red color)

If you want know more about me, You could search in google or Youtube with this keywords: ERSOW or My Name.