

## SUMMARY

# TRACKING BOLA MENGGUNAKAN ROBOTINO

BALL TRACKING USING ROBOTINO

Created by NAHLA, GENTANG SYABBA

**Subject** : sistem, pelacakan  
**Subject Alt** : Robotics , Tracking system  
**Keyword** : Robotino; deteksi; deteksi bola; pengolahan citra;pelacakan

### Description :

Dalam tugas akhir ini, digunakan Robotino sebagai piranti kerasnya dan sebagai piranti lunaknya dibuatlah program menggunakan bahasa pemrograman bahasa C++ dan library open source computer vision sehingga Robotino dapat mendeteksi bola dengan metode image processing menggunakan webcam yang terpasang pada Robotino, lalu melakukan tracking untuk menangkap dan menggiring bola menggunakan gripper yang terpasang pada Robotino kemudian membawa bola ke arah gawang. Proses image processing digunakan untuk mendeteksi obyek bola dan gawang, sehingga dari proses ini didapatkan data mengenai titik tengah obyek dan luasan obyek yang terdeteksi. Dari data yang didapatkan tersebut digunakan sebagai inputan variabel pada perhitungan Motor Controller Robotino sehingga akan didapatkan hasil keputusan nilai yang diperlukan dalam mengatur kecepatan gerak motor Robotino pada saat mendekati obyek.

### Description Alt:

In this final project, we used Robotino as a hardware tool and as the software is made programs using C++ programming languages and open source computer vision library, so Robotino can detect the ball with image processing method using webcam installed on Robotino, and then do tracking to catch and lead ball using a gripper attached to Robotino then carried the ball toward the goal. The process of image processing is used to detect the ball and goal, so from this process obtained data about the midpoint of the object and extent of the detected object. From the data obtained is used as input variables in the calculation of Robotino Motor Controller so we will get the decision value that is required to regulate the velocity of the Robotino motor when approaching an object.

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