

**ROBOT SMART TRUSH BIN BASED ON ARDUINO UNO
USING THE BLUETOOTH CONNECTION**

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ABSTRACT

The smart trush bin robot is a trash robot that has an actuator in the form of a wheel that is driven by a 12 V DC motor to shift position, so that the smart trush bin robot can move position from one point to another according to instructions given by the user from the smartphone via Bluetooth HC-05 connection. This trash can is able to open automatically if the front, right and left ultrasonic sensors detect the presence of objects at a radius of less than 20 cm. This robot is able to lift the weight that is in the trash can reach 4 KG smoothly in each direction of motion while at a weight of 5 KG the robot is still able to move with limited motion to the right and left. This robot can be controlled at a maximum distance of 13 cm.

Keywords: Smart Trush Bin Robot, Bluetooth HC-05, ultrasonic sensor