

**DEVELOPMENT OF A WIRELESS CONTROL SYSTEM ANDROID
APPLICATION FOR A CHICKEN FEATHER PLUCKING MACHINE
USING A BLUETOOTH MODULE**

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ABSTRACT

In an effort to improve efficiency and operational safety in the chicken feather plucking process, this study develops a wireless control system based on an Android application using the HC-05 Bluetooth module. The system is designed to replace the manual operation method commonly used in chicken feather plucking machines, which is often time-consuming and poses safety risks to operators. The application was developed using the Kodular platform and connects directly to an Arduino Nano microcontroller via Bluetooth serial communication. This system allows users to control the machine from a distance of up to 5 meters reliably, featuring essential functions such as Start/Stop buttons, a digital timer, and machine status indicators. Based on testing, the system responds quickly (<1 second) and is easy to operate, making it an effective and cost-efficient solution for small and medium-sized industries. The results indicate that the system enhances convenience, safety, and operational flexibility of the chicken feather plucking machine.

Keywords: *Android, HC-05 Bluetooth, Arduino Nano, Chicken Feather Pluckin, Machine, Wireless Control, Kodular.*