

UNIVERSITI TEKNOLOGI MARA

**AUTOMATIC AND REMOTE-
CONTROLLED PET FEEDER USING
BLYNK**

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ABSTRACT

In response to the increasing demand for innovative pet care solutions, this thesis proposes the 'Automatic and Remote-Controlled Pet Feeder Using Blynk,' a cutting-edge Internet of Things (IoT) project. Powered by Arduino WeMos D1 WiFi UNO ESP 8266 R2 microcontroller, this system utilizes a servo motor to precisely dispense pet food, providing users remote control and monitoring capabilities via the Blynk platform. The integration of real-time feedback features, such as an LED and buzzer, improves the pet feeding experience. Validation through simulation modeling in Proteus software and successful hardware prototype development underscore the operational efficiency of this forward-thinking IoT solution. This project not only revolutionizes pet care procedures, but it also serves as a prime illustration of how Internet of Things (IoT) apps may improve the pet owner experience while revolutionizing pet care practices.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Smart technology use continues to grow beyond applications that target humans to include many aspects of daily life, such as pet care practices. The increasing number of people throughout the world who own pets has led to a desire for creative solutions that put the convenience and well-being of both pet owners and the pets they own first. The use of Internet of Things (IoT) technologies in pet feeding has become more popular as a replacement for traditional methods, which are frequently defined by imprecision and a lack of real-time control. Projects like "Automatic and Remote-Controlled Pet Feeder Using Blynk," which seeks to transform pet care through the convergence of innovative software and hardware solutions, are crucial because of this conceptual change.

The use of the Arduino WeMos D1 WiFi UNO ESP 8266 microcontroller, an open-source platform renowned for its adaptability, is essential to the project. Pet food is dispensed precisely and under control thanks to the microcontroller, which gives the system the processing power needed to precisely operate the servo motor. Simultaneously, the Blynk platform is essential as it offers an easily usable interface for remote control and monitoring. With a level of convenience and flexibility not achievable with traditional approaches, this hardware-software combination gives pet owners unprecedented real-time involvement with the feeding process.

Beyond only combining hardware and software, the project takes a creative approach by adding real-time feedback methods like LED indications. This feature does not only ensure that the feeding procedure is carried out accurately but also improve user engagement, resulting in a more responsive and interactive pet care experience. The creation of the hardware prototype is followed by simulation modelling in Proteus software to highlight the project's trustworthiness and functionality.