م العالي والبحث العلمي، العراق
جامعة بابل
ية تكنولوجيا المعلومات
سم شبكات المعلومات
الدراسة: (الصباحية ، المسائية)

Emulate IoT Traffic Using Esp32 And Raspberry Pi

مشروع التخرج هو احد متطلبات الحصول على درجة البكالوريوس في تخصص شبكات المعلومات في تكنولوجيا المعلومات.

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Abstract

This project explores the integration of a DHT11 temperature and humidity sensor with an ESP32 microcontroller, communicating data to a Raspberry Pi. The DHT11, connected to the ESP32, collects real-time environmental data, including temperature and humidity levels. Through wireless communication, the ESP32 transmits this data to the Raspberry Pi, which serves as a central hub for data processing and analysis. The Raspberry Pi processes the incoming sensor data, performs calculations, and presents the results in a user-friendly interface. Additionally, the project investigates the potential applications of this setup, such as environmental monitoring, home automation, and agricultural systems. Through practical implementation and experimentation, this project aims to provide insights into the seamless integration of sensor technology with microcontrollers for diverse IoT applications.