Doorbell Alerting System
Electrical & Computer Engineering

San Diego State University — College of Engineering

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Project Overview

It is a smart upgrade for conventional doorbell systems that upgrades your current one to a more comfortable and quicker experience. It is designed to interface with an existing 16-24V doorbell and wiring.

When a visitor presses the button, an optocoupler detection circuit passes a 0-5V digital signal to an Arduino with Wi-Fi capabilities. The Arduino reads the input signal, and if the button is pressed, it sends an event to a host server that uses IFTTT protocol. The server generates an email notification to be read on the user's mobile device.
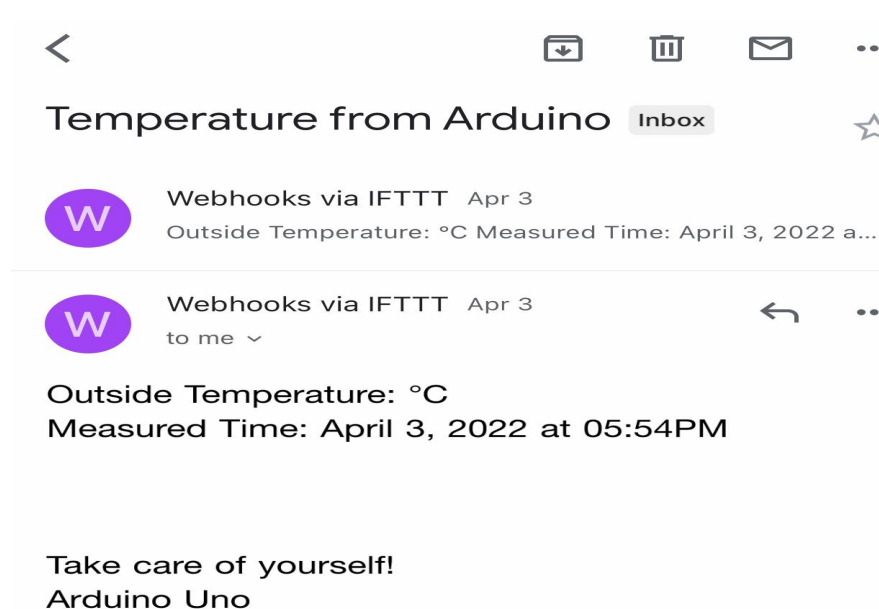
Main Components

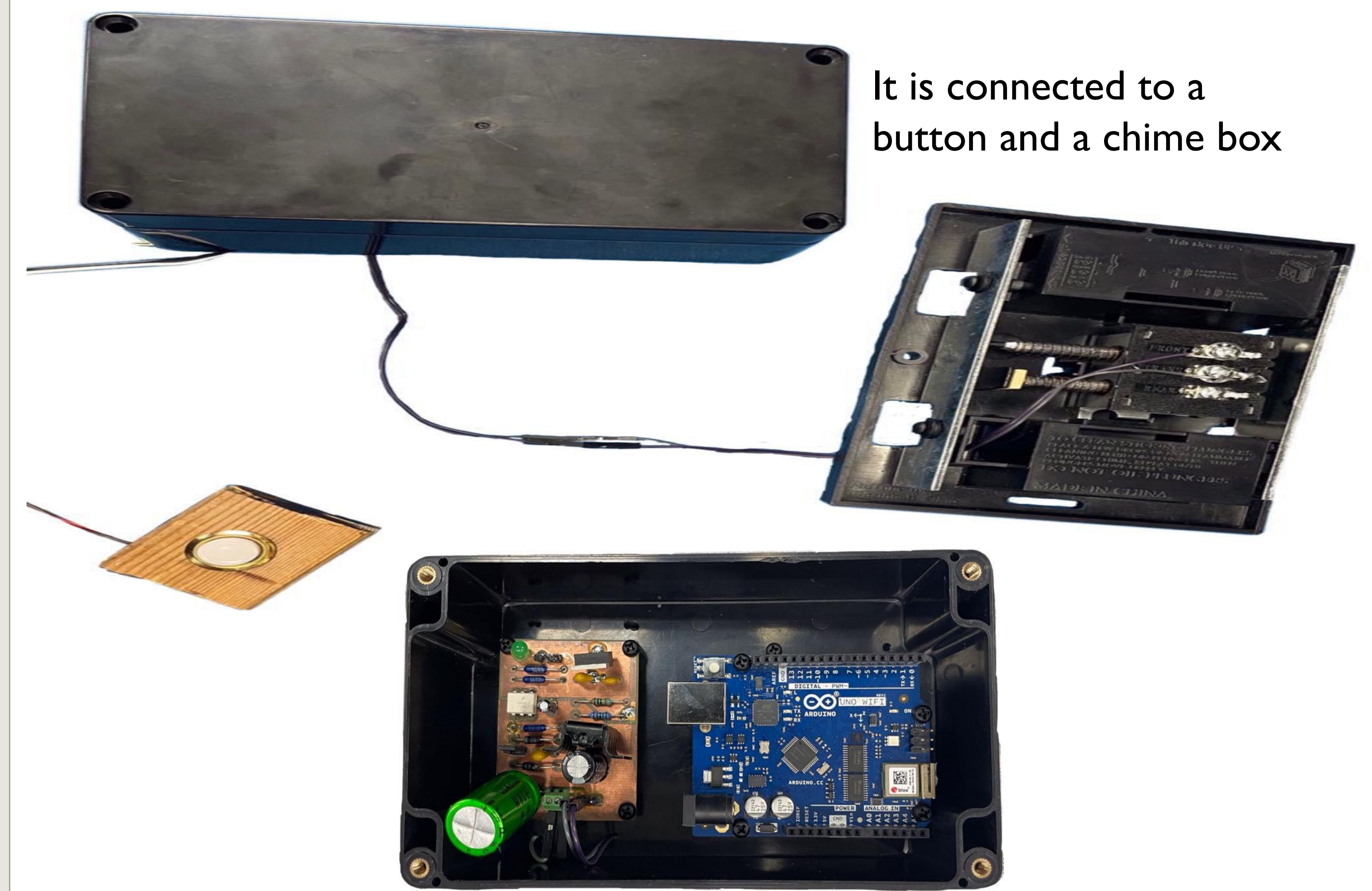Main-core Component Arduino

PCB: Power Supply Circuit and Doorbell interface Circuit

Email Interface

Final Product

It is connected to a button and a chime box
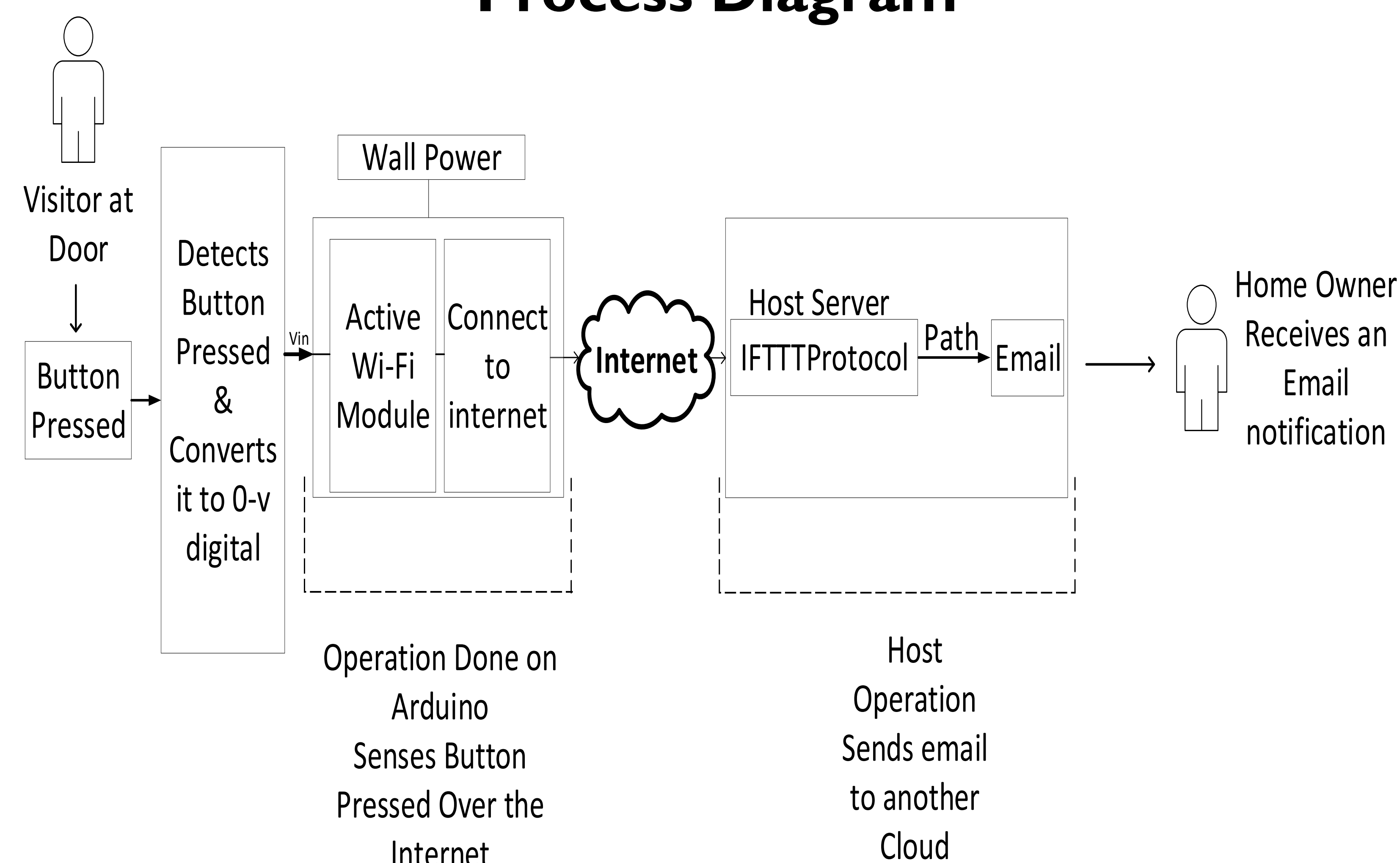
Dorr-Bell Engineering Team

(Left to Right)

Rawan Althrwi — Computer Engineer
Zewei Liu — Electrical Engineer
Jose Perez — Electrical Engineer
Eddie Salazar — Electrical Engineer
Rashed Abdullah — Electrical Engineer

Process Diagram

Visitor at Door → Button Pressed → Detects Button Pressed & Converts it to 0-v digital → Active Wi-Fi Module → Connect to internet → Internet → Host Server: IFTTTProtocol → Path → Email → Home Owner Receives an Email notification

Wall Power

Operation Done on Arduino Senses Button Pressed Over the Internet

Host Operation Sends email to another Cloud

Acknowledgment

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