

# UVC Automatic Door Handle Sanitizer

## Project

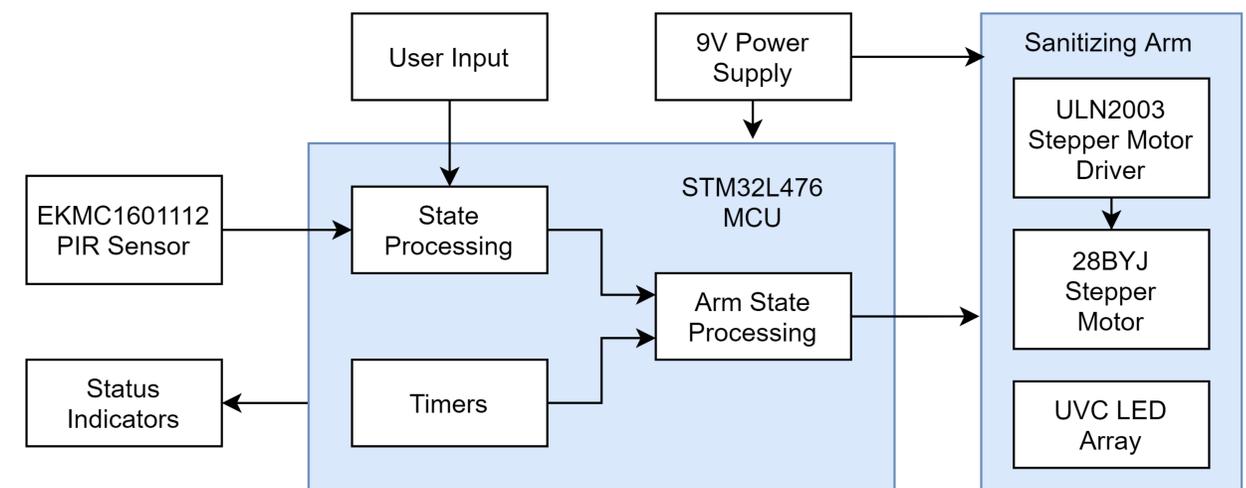
Infectious disease is easily spread through the use of door handles

- A virus placed on a single door handle can spread through the remainder of the building within 2 to 4 hours
- Ultraviolet Class C light (UVC) is effective at sanitizing surfaces easily and at a low cost
- UVC light can be harmful when there are high levels of direct exposure to the eyes

Automatic Door Handle Sanitizer

- The device applies UVC light to effectively sanitize while safely allowing the use of the door

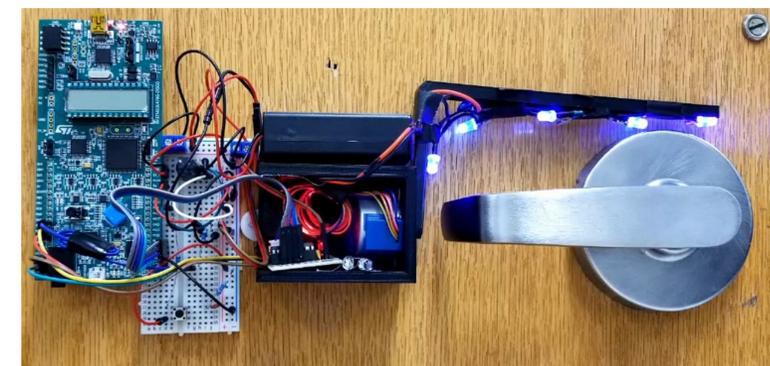
## System



## Methods

- Automatically operates with minimal user input by performing a sanitation cycle on a timer
- Effectively sanitizes the entire surface of the door handle by applying UVC light while slowly rotating around the handle
- Operates safely by halting sanitation cycle when movement is detected. It utilizes a PIR sensor that will detect someone approaching the door within 10 ft.

## Conclusion



The assembled device is able to apply UVC light on a timer and pause operation to provide safe use of the door. Throughout the project we learned how to effectively program a microcontroller for embedded applications

While the device applies UVC light to the whole surface at the necessary amount, efficacy testing should be done to verify that the exposure is sanitizing the handle