

# AMC SS2024

## Student Projects

### (1) Schafalarm (Sheep Alarm)

Motion detection and tracking of sheep flocks.



Go here: [Schafalarm](#)

#### Students

- Sam (Advisor)
- Tasio
- Marlene

### (2) Chicken Check

Where are the chicken? In the chicken coop? Sitting on the nest? Breeding? Outside?



Go here: [Chicken Check](#)

#### Students

- Taycan (Advisor)
- Sam (Advisor)
- Shreya (Advisor)
- Jihad
- Tarik
- Nour

### (3) Home Assistant Server System

Home Automation setup (on Raspberry PI or the like) with own WiFi router (access point) for an IoT system teaching.



Go here: [Home Assistant Server](#)

## Students

- Taycan (Advisor)
- Ekaterina
- Anastasiia
- Demid

## (4) Bird Feeder (Pet Feeder)



Go here: [Bird Feeder](#)

## Students

- Shreya (Advisor)
- Sam (Advisor)
- Taycan (Advisor)
- Seif

## (5) Irrigation Cart Nozzle



Go here: [Irrigation Cart Nozzle](#)

## Students

- Amr
- any more?

## (6) Water Quantity Measurement

Building a **groundwater gauge** with low power design, real-time clock and LoRaWAN data transmission.



Go here: [Groundwater Gauge](#)

## Students

- Melchior
- Andreas
- Henrydon

# Further Ideas of Minor Priority

## (7) Laser Scanning Drone in Chimneys

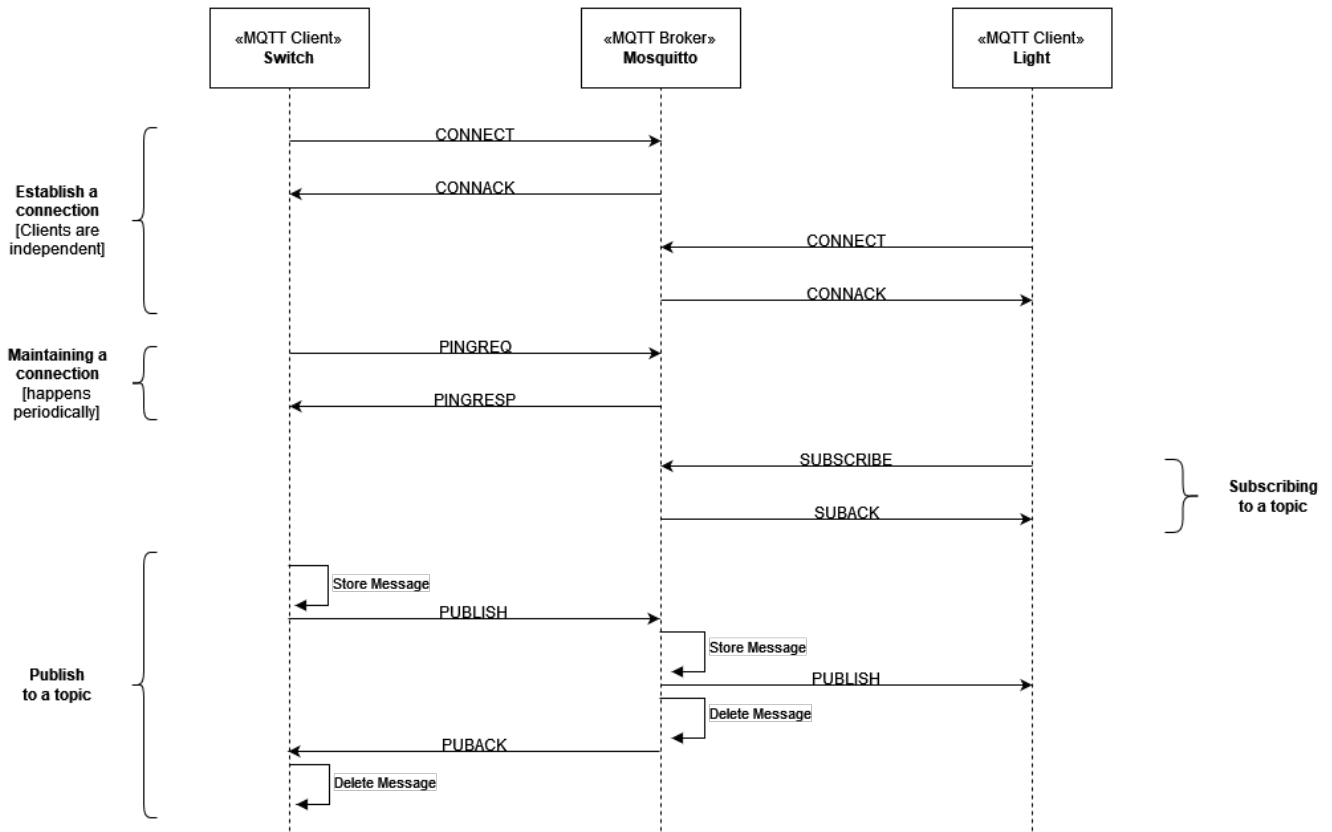
## (8) Green House Window Opener Integration

### Stuff to be sorted

### MQTT Publish-Subscribe Sequence

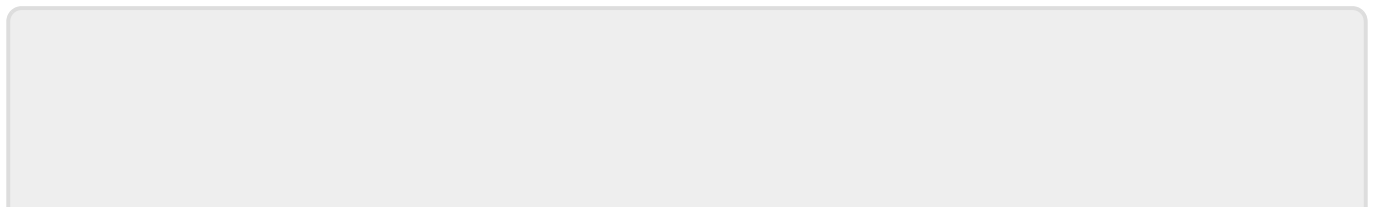
Template

MQTT Full Sequence Example [QOS 1]



### Reseller

- <https://www.amazon.de/dp/B09YXJKBFV>



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