MCPS PROJECT

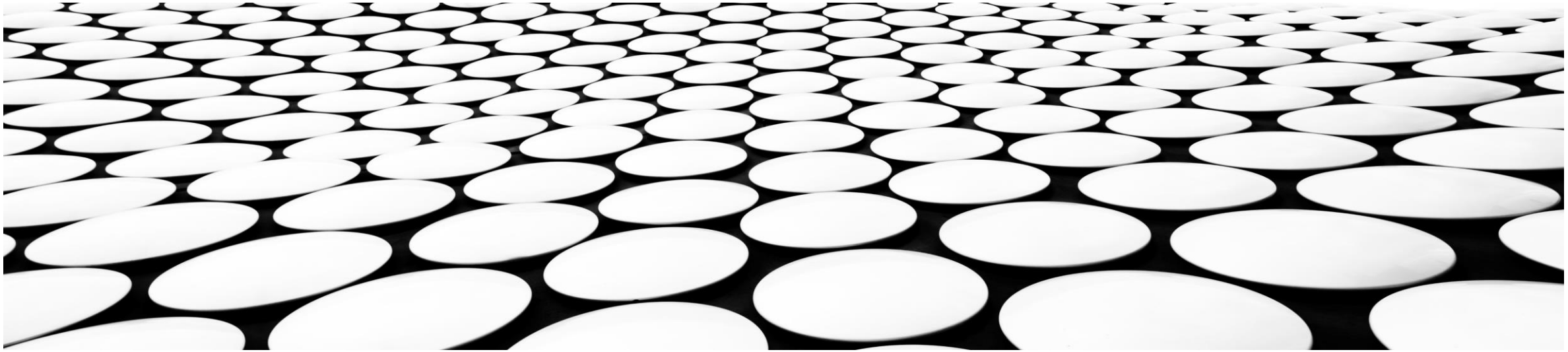
HOUSE TEMPERATURE MONITORING SYSTEM & SMART AIR DISTRIBUTION

MOBILE AND CYBER-PHYSICAL SYSTEMS
A.Y. 2021/2022

ELIA PICCOLI – 621332

DOMENICO TUPPUTI - 585794

HTTPS://GITHUB.COM/ELIAPICCOLI/MCPS-PROJECT

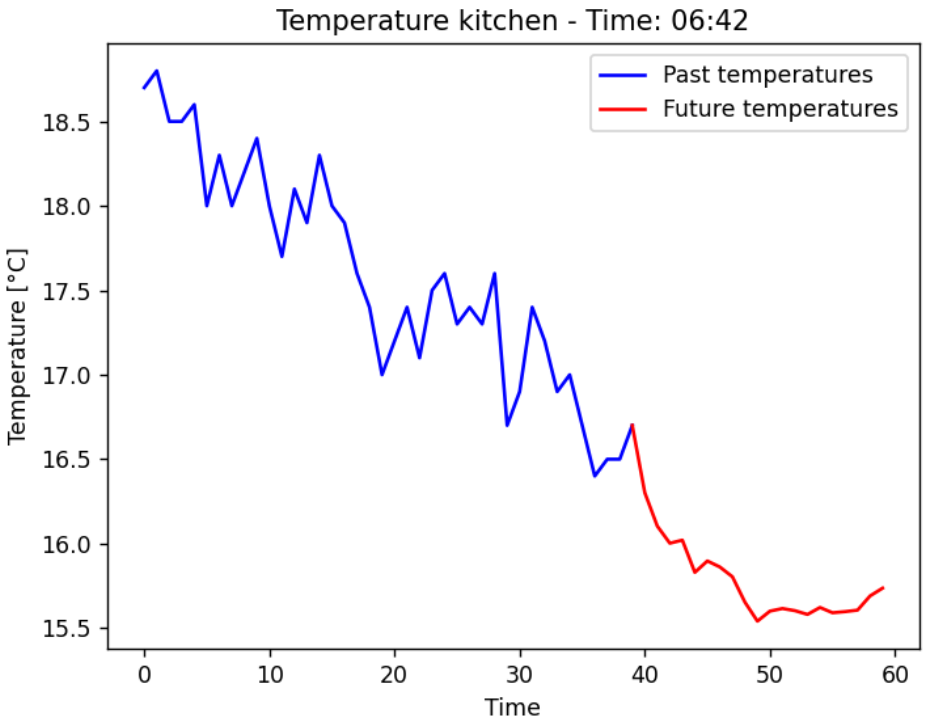


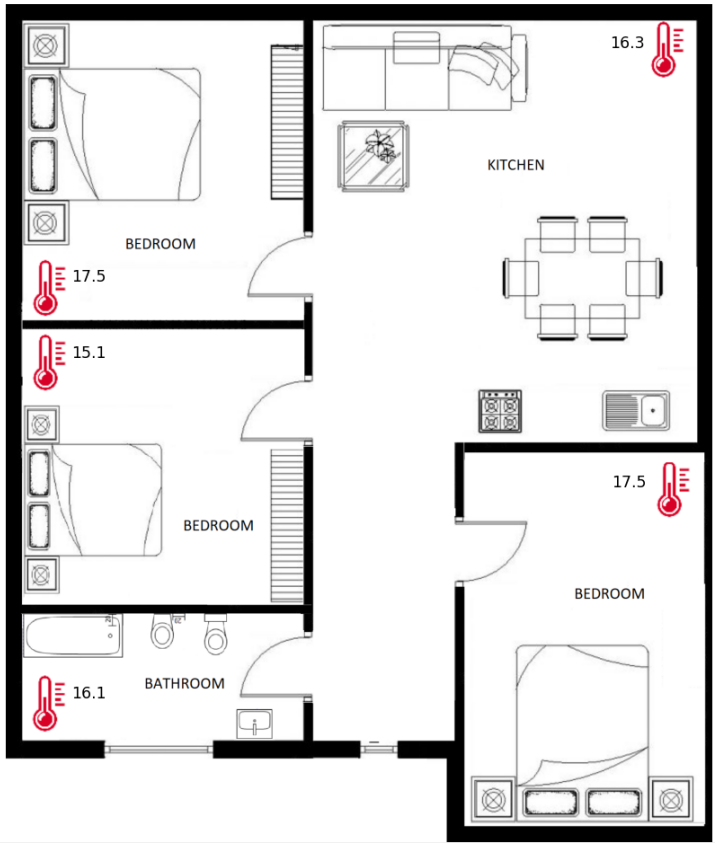
PROBLEM DESCRIPTION

Automatic temperature monitoring system

Future temperature prediction

Smart temperature balancing



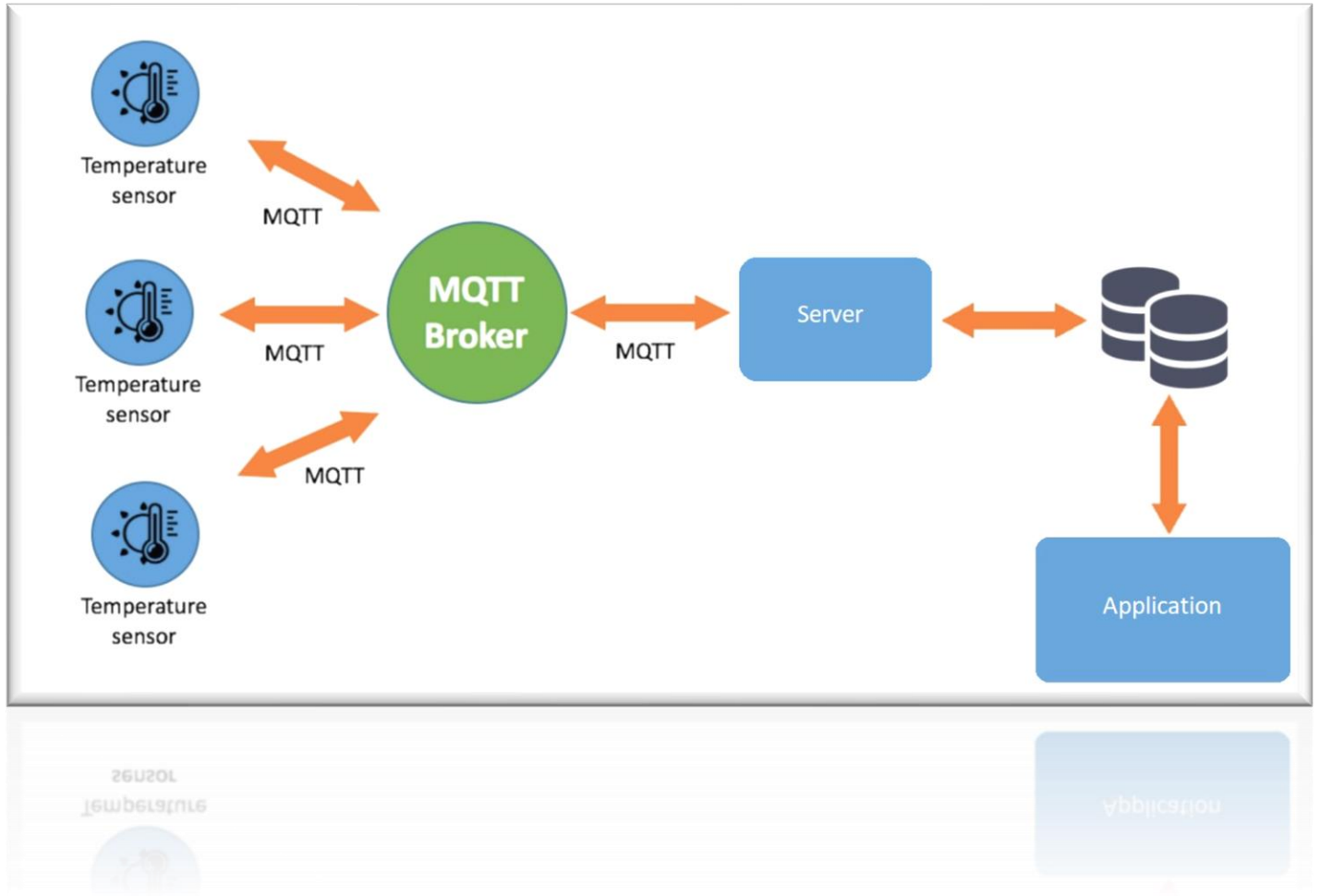


PROPOSED SOLUTION

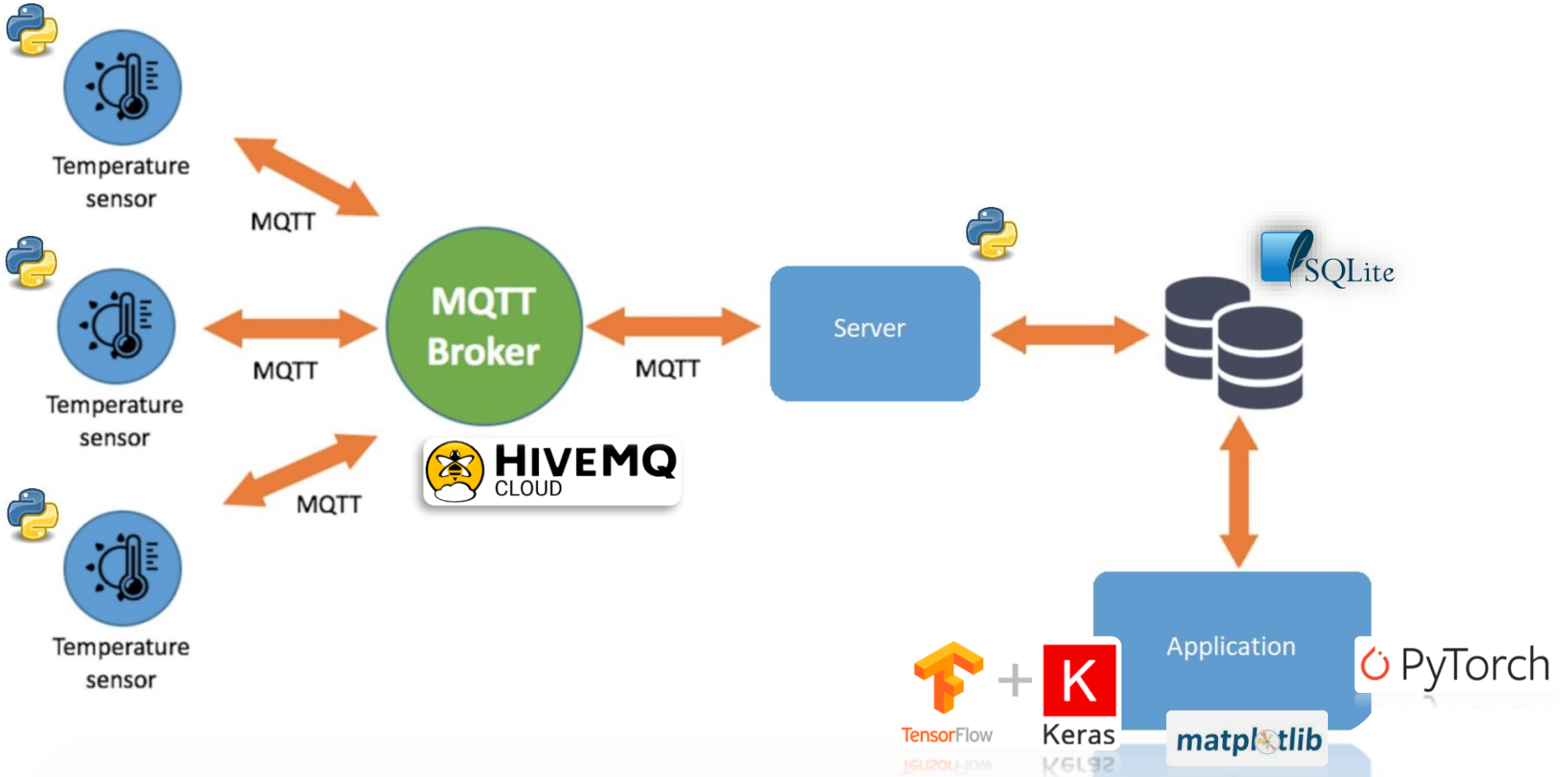
- Sensor in each room of the house.
- Graphical interface to monitor current temperatures and to show near future trend.
- System that interacts with the ventilation system of each room.

SYSTEM ARCHITECTURE

- Sensors
- MQTT broker
- Server
- Relational database
- Application

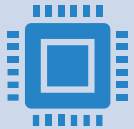


HARDWARE & SOFTWARE



Start
LIVE DEMO

FUTURE WORK



Install real sensors in a house with a built-in programmable ventilation system.

Interact with an air conditioning system: let the user set a desired temperature.

For large rooms manage more than one sensor.