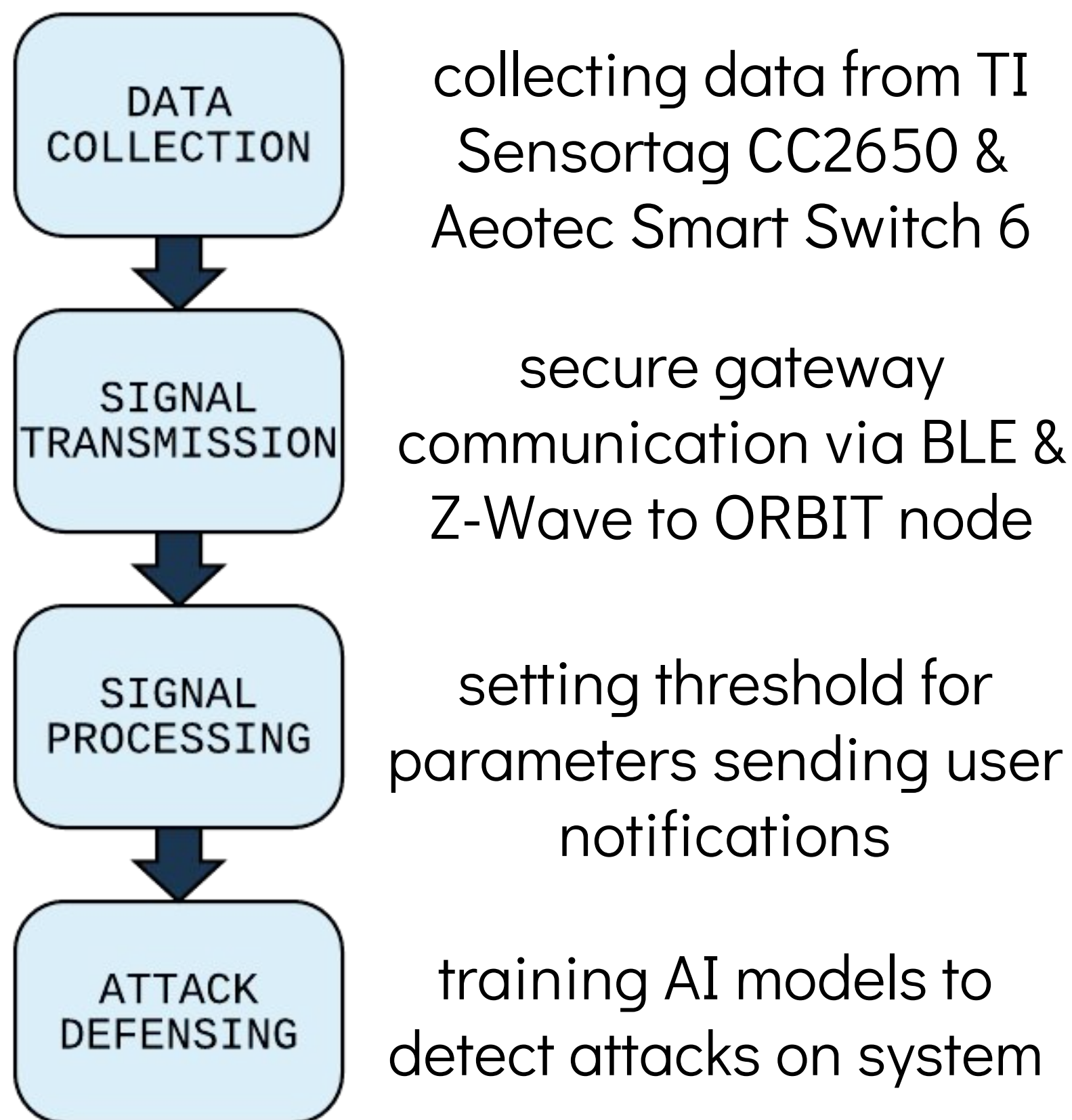
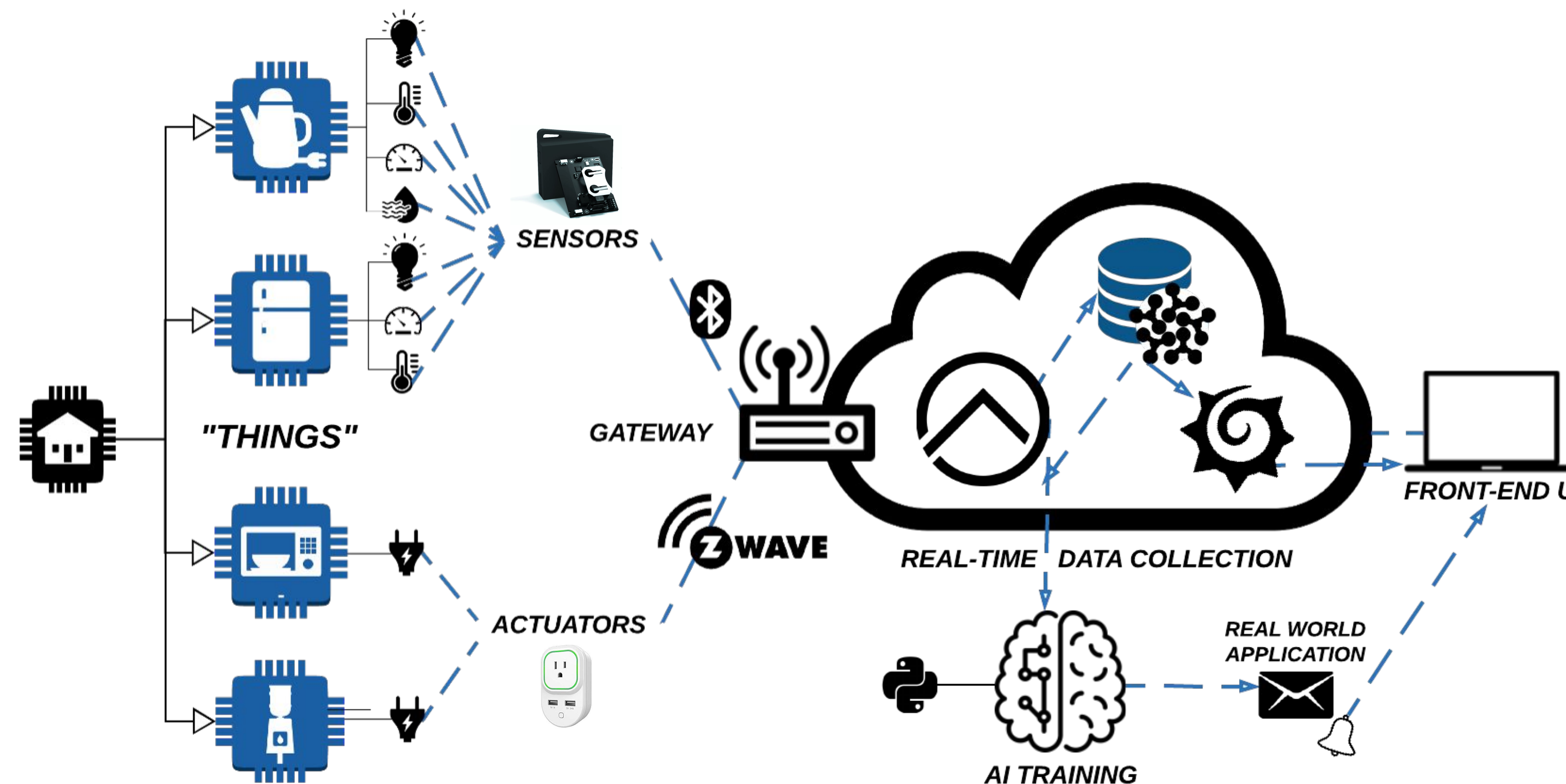


OBJECTIVE

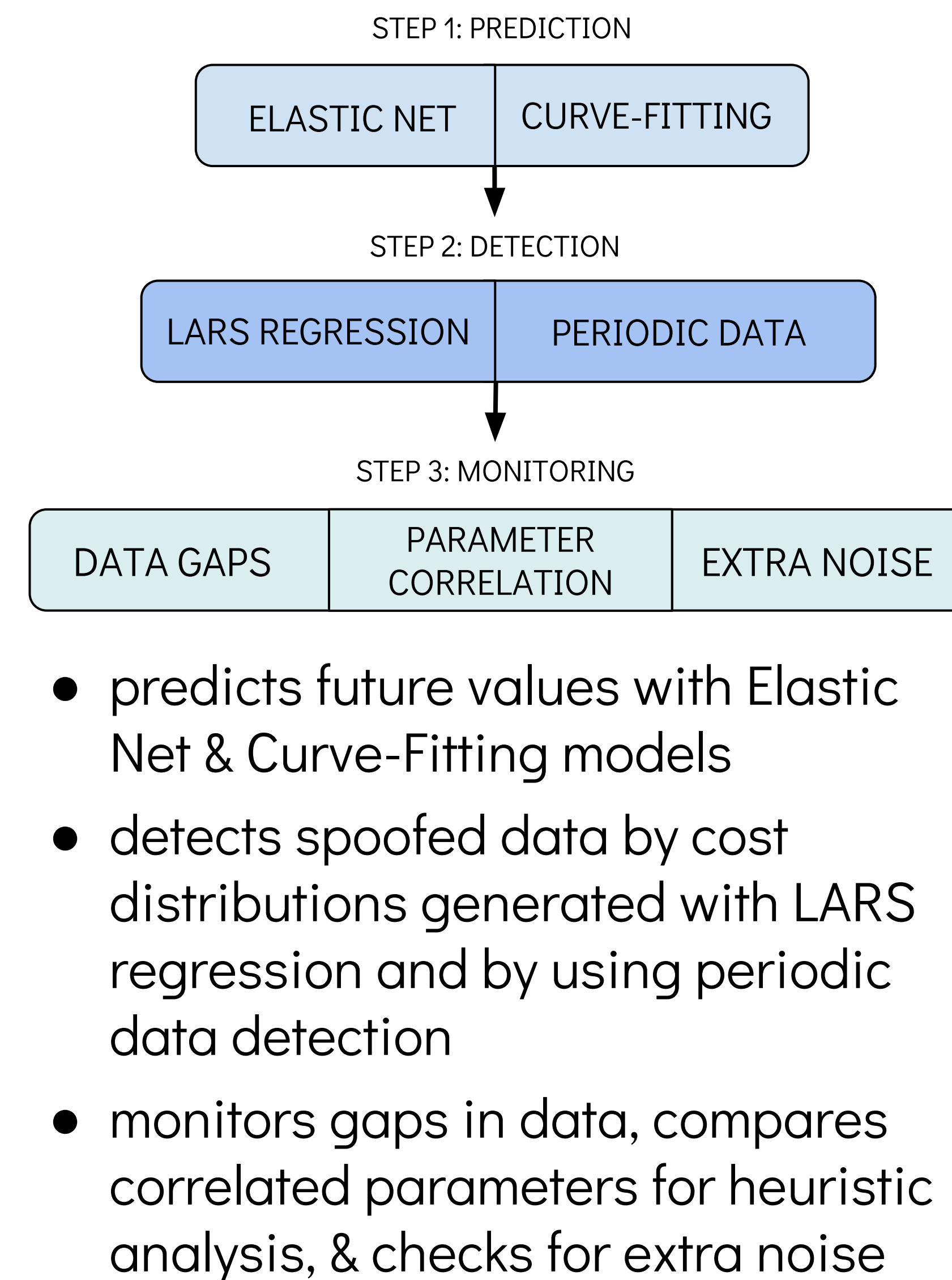
Designing an end-to-end security-conscious IoT framework for everyday home devices using machine learning.



FRAMEWORK ARCHITECTURE

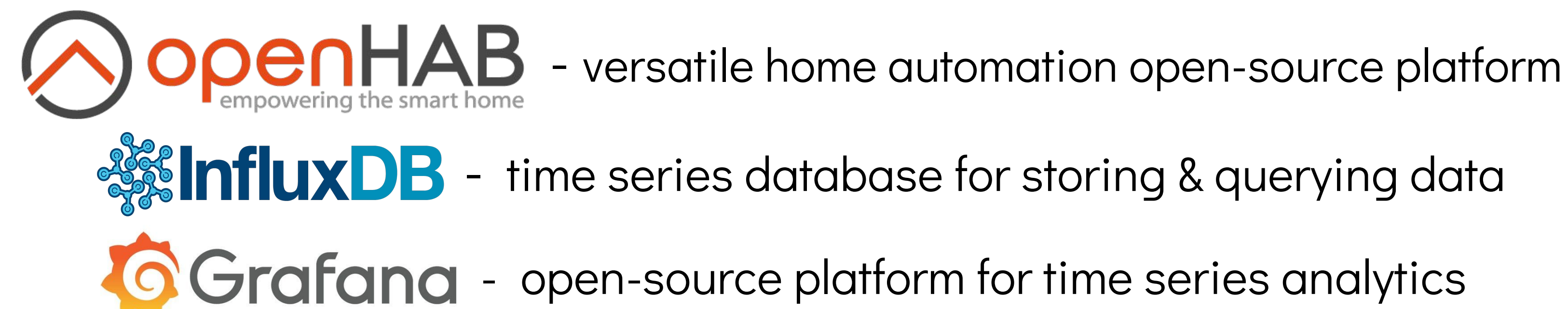


AI MODELS

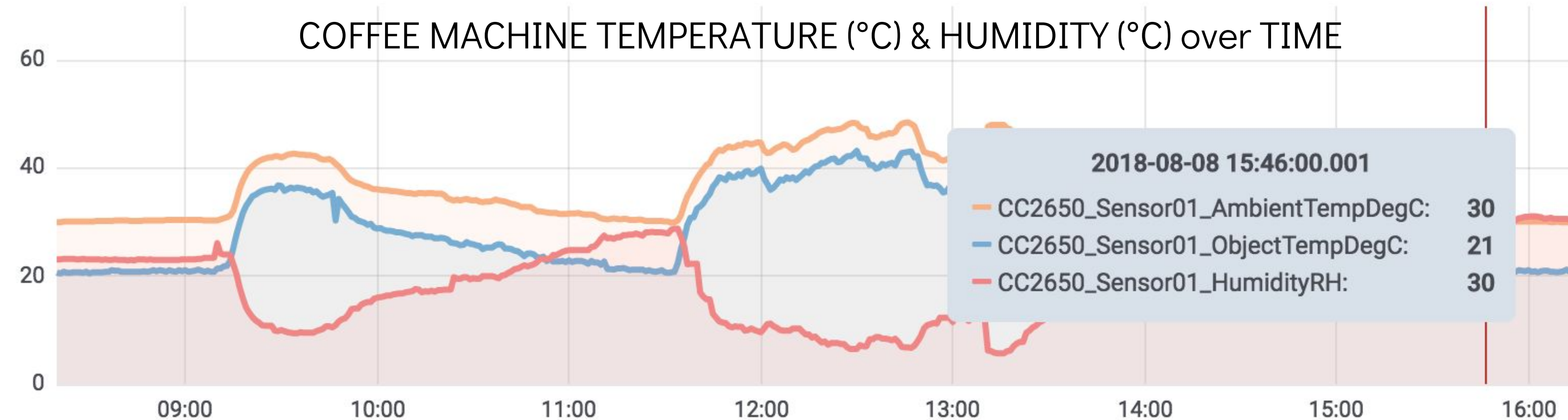


DATABASE PERSISTENCE

To persist data in real time, openHAB stores all configured things' states on InfluxDB; allowing user to create customizable graphs on Grafana



FRONT-END APPLICATION



REFERENCES

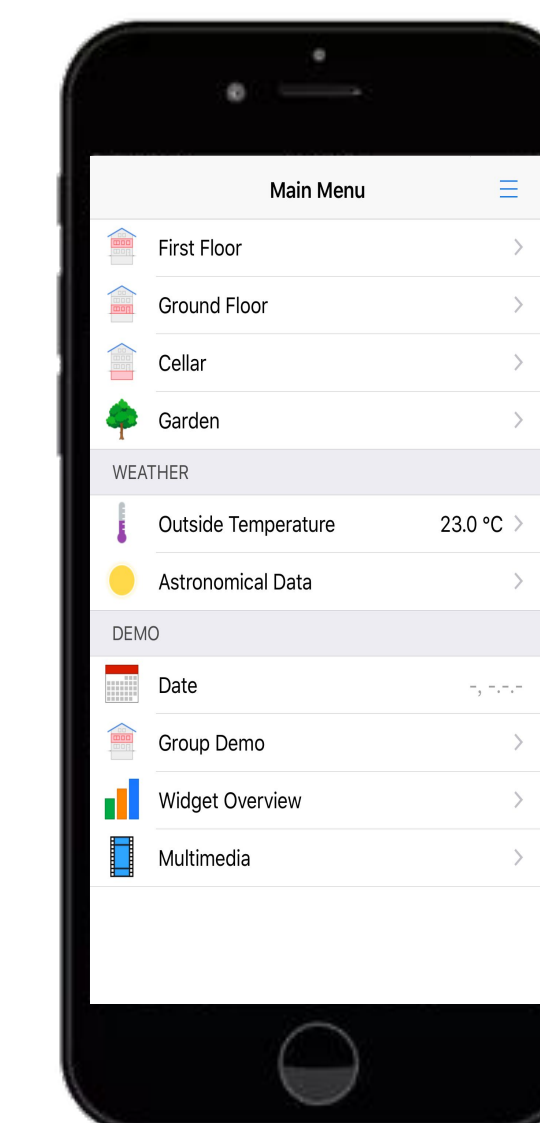
- [1] SimpleLink™ Bluetooth LE Multi-standard SensorTag CC2650STK
- [2] Aeotec Aeon Smart Switch 6 for Z-Wave
- [3] Gmail API
- [4] BluePy Github Repository
- [5] REST API



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FUTURE WORK

- adjust AI model to counter & defend from future attacks
- implement email notifier further
- shift front-end application to remote access of openHAB



- expand framework across more home devices for better integrated home automation system
- make UI more accessible for remote users

openHAB's lightweight UI: HabPanel
sample UI after tunneling iOS device to HabPanel

