Cat-Sitter Project Installation Guide

Component 1: Arduino MKR IoT Carrier Rev2

**Hardware Setup:**

Connect the MKR IoT Carrier Rev2 shield to the MKR 1010 Wifi board.

Connect the PIR sensor to the A0 analog grove connector on the MKR IoT Carrier.

A circuit board with wires and wires attached to a wood surface

Description automatically generated

**Software Setup:**

Install the Arduino IDE on your computer if not already installed.

Open the Arduino IDE, select the appropriate board (Arduino MKR IoT Carrier Rev2), and install libraries referenced in fireplace-board sketch.

Open the fireplace-board sketch and upload it to the MKR IoT Carrier Rev2.

Component 2: Arduino Uno R4 Wifi

**Hardware Setup:**

Connect the DHT11 sensor to the data pin 8, 5V and GND pins on the Arduino Uno R4 Wifi.

A computer monitor with wires

Description automatically generated

**Software Setup:**

Install the Arduino IDE on your computer if not already installed.

Open the Arduino IDE, select the appropriate board (Arduino Uno R4 Wifi), and and install libraries referenced in hallway-board sketch.

Open the hallway-board sketch and upload it to the Uno R4 Wifi.

MongoDB Database:

Install MongoDB on your local machine.  
<https://www.mongodb.com/try/download/community>

Start a mongod server in terminal by running: ‘mongod --dbpath ~/data/db’

Component 3: Node.js App

**Software Setup:**

Install Node.js and npm on your computer if not already installed.

Open terminal in cat-sitter-webapp folder and run ‘npm install’ to download necessary packages.

Run ‘node app.js’ from terminal in cat-sitter-webapp folder to start the app, connect to mqtt queue and begin listening for messages from Arduino boards.

Navigate to <http://localhost:3000/> to see the chart

A screenshot of a graph

Description automatically generated

A diagram of a smart cat

Description automatically generated with medium confidence