

From HomeKit to Homelab

Mike Solin

whoami

It me

- Mike Solin (@flammable)
- Infrastructure Systems Engineer @ Emory Healthcare
- Cofounded Greater Philadelphia Mac Admins regional meetup group
  - We’re one of the oldest meetup groups in the community
  - Just celebrated 11 years! 🥳

Why have a smart home?

- Turn on/off lights easily
- Know when the laundry is done
- Who’s at the door?
- Are those kids on my lawn again?!
- Automate almost everything 🤖

I didn’t want to self-host my smart home.


Privacy

HomeKit

Easy to get started

Supports a wide range of devices

**Just need a HomePod,
HomeView, or Apple TV**



Homebridge

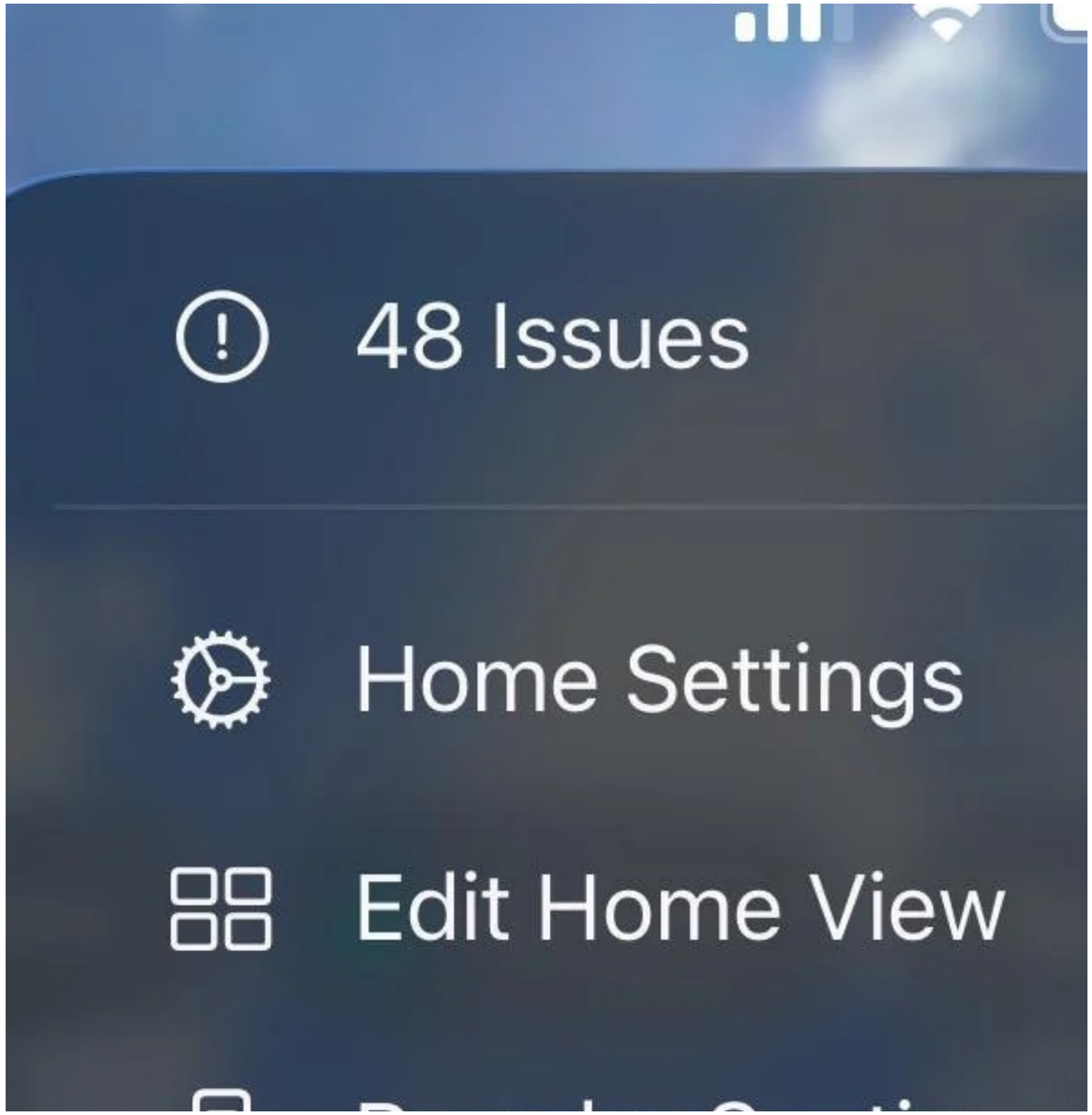
Open source

Adds unsupported devices to HomeKit



HomeKit issues

HomeKit just works! Until it doesn’t.



Turns out I was already self-hosting my smart home.

(I was just doing it badly)

Home Assistant

Open source

Huge community

Major updates every month



Interoperability

- Anything can talk to anything!
- Vendor does not matter
- You’re limited by your imagination

Integrations - devices and services that work with Home Assistant

All integrations 1,451
AI & voice 36
Appliances & cleaning 65
Blinds & curtains 61
Buttons & remotes 17
Climate 173
Computers & network 156
DIY & makers 69
Energy 169
Finance 15
Garden & plants 20
Health & wellbeing 22
Helpers 39
Hubs & protocols 81
Lighting 75
Local services 13
Media & entertainment 132
Messaging & notifications 48
News & social media 10
Other ecosystems 9
Pets 5
Plugs & switches 75
Presence & location 66
Productivity & information 33
Security & safety 99
Sensors 68

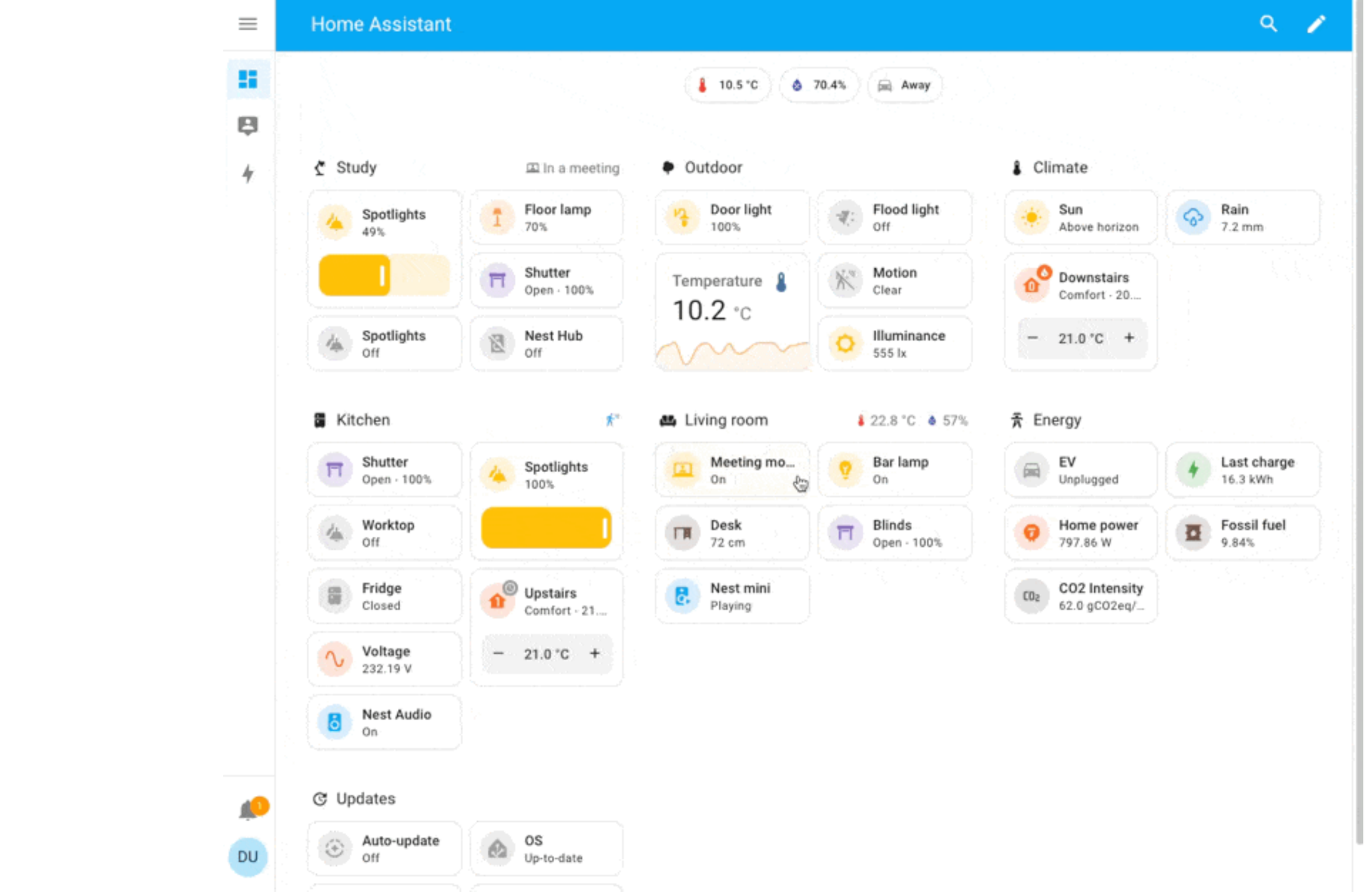
All connections | All versions | All IoT classes | All quality scales

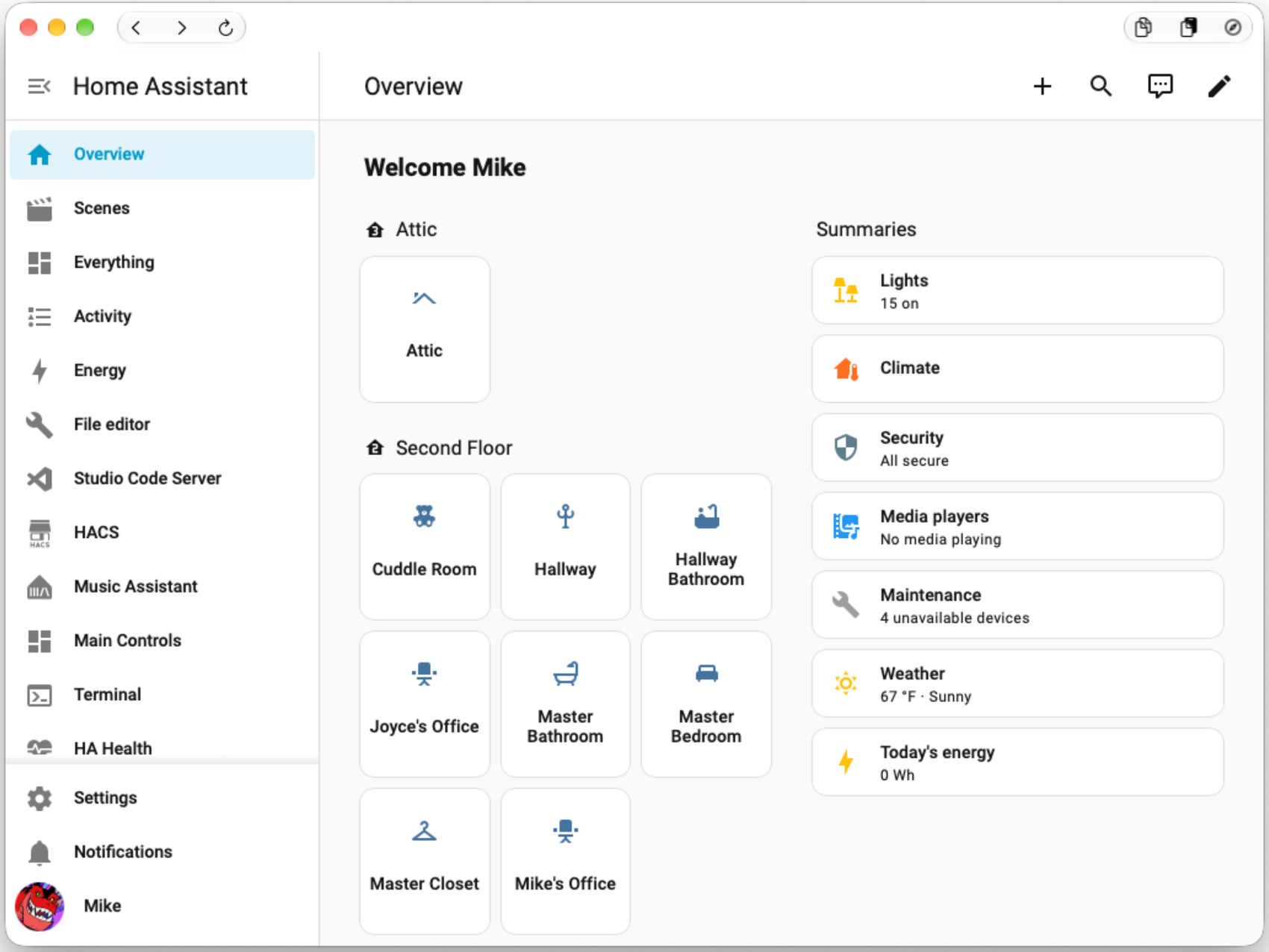
Search integrations...

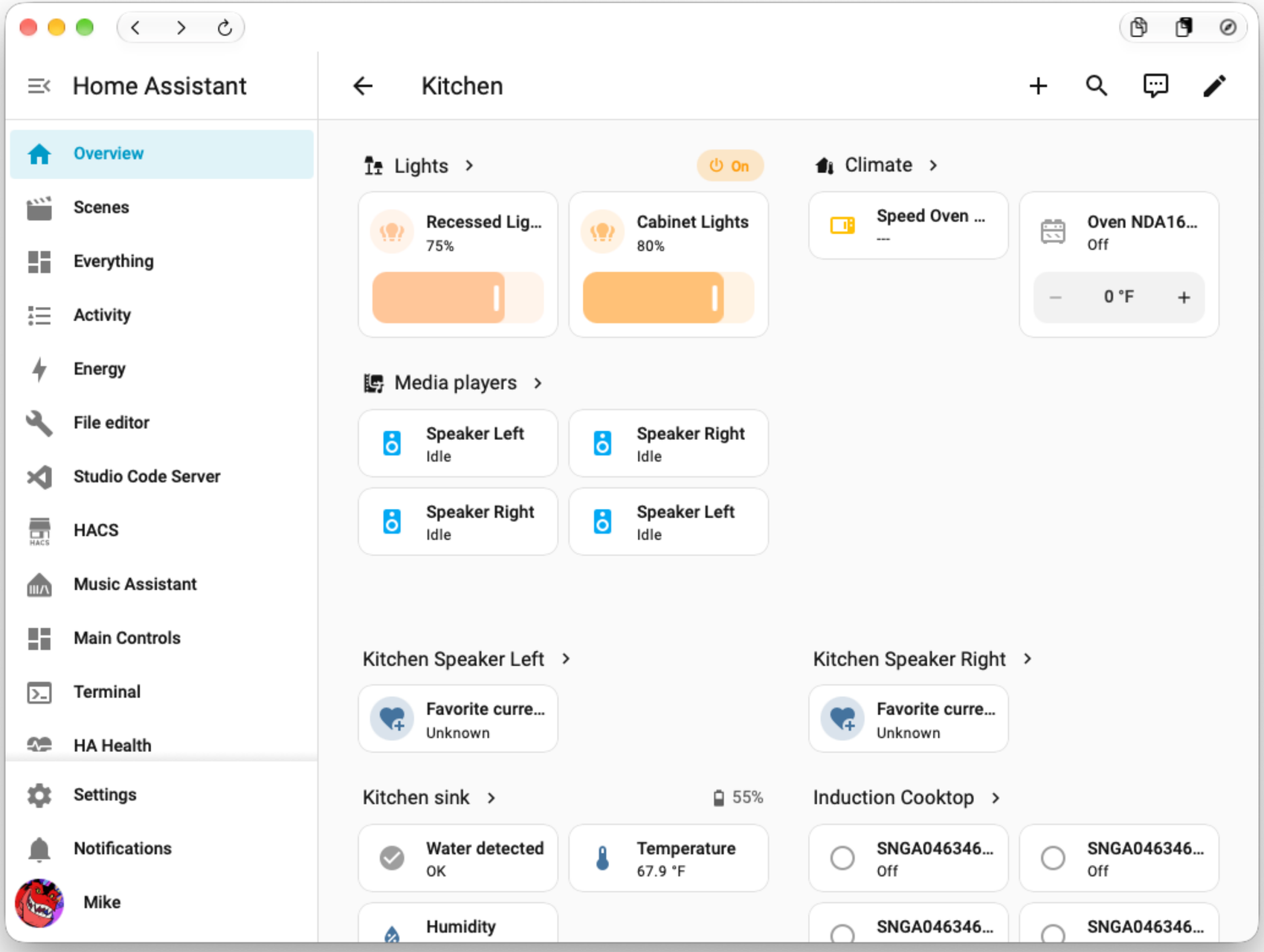
Featured | Works with Home Assistant

19 of 1,451 integrations

Amazon Alexa
ESPHome
Google Assistant
Google Cast
HomeKit Bridge
IKEA TRÅDFRI
KNX
Lutron Caséta
Matter
Model Context Protocol
MQTT
Music Assistant
Philips Hue
Plex Media Server
Shelly
SmartThings
Sonos
Z-Wave


Home Assistant
10.5 °C
70.4%
Away
Study
In a meeting
Spotlights
49%
Floor lamp
70%
Shutter
Open · 100%
Spotlights
Off
Nest Hub
Off
Outdoor
Door light
100%
Flood light
Off
Temperature
10.2 °C
Motion
Clear
Illuminance
555 lx
Climate
Sun
Above horizon
Rain
7.2 mm
Downstairs
Comfort · 20...
21.0 °C
Kitchen
Shutter
Open · 100%
Spotlights
100%
Worktop
Off
Fridge
Closed
Upstairs
Comfort · 21...
21.0 °C
Voltage
232.19 V
Nest Audio
On
Living room
22.8 °C
57%
Meeting mo...
On
Bar lamp
On
Desk
72 cm
Blinds
Open · 100%
Nest mini
Playing
Energy
EV
Unplugged
Last charge
16.3 kWh
Home power
797.86 W
Fossil fuel
9.84%
CO2 Intensity
62.0 gCO2eq/...
Updates
Auto-update
Off
OS
Up-to-date
DU


Home Assistant
Overview
Scenes
Everything
Activity
Energy
File editor
Studio Code Server
HACS
Music Assistant
Main Controls
Terminal
HA Health
Settings
Notifications
Mike
Overview
Welcome Mike
Attic
Attic
Second Floor
Cuddle Room
Hallway
Hallway Bathroom
Joyce's Office
Master Bathroom
Master Bedroom
Master Closet
Mike's Office
Summaries
Lights
15 on
Climate
Security
All secure
Media players
No media playing
Maintenance
4 unavailable devices
Weather
67 °F · Sunny
Today's energy
0 Wh


Home Assistant
Overview
Scenes
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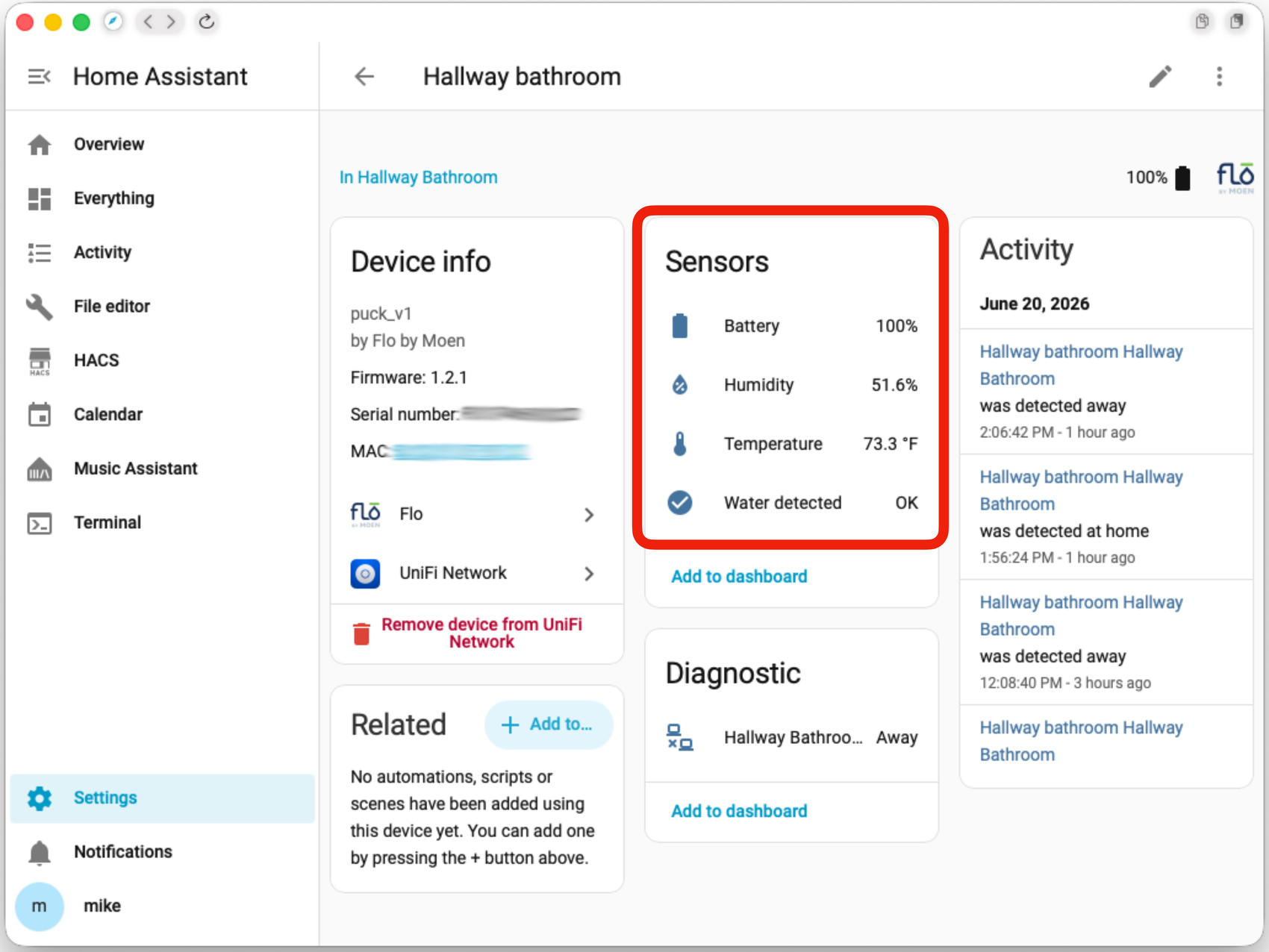
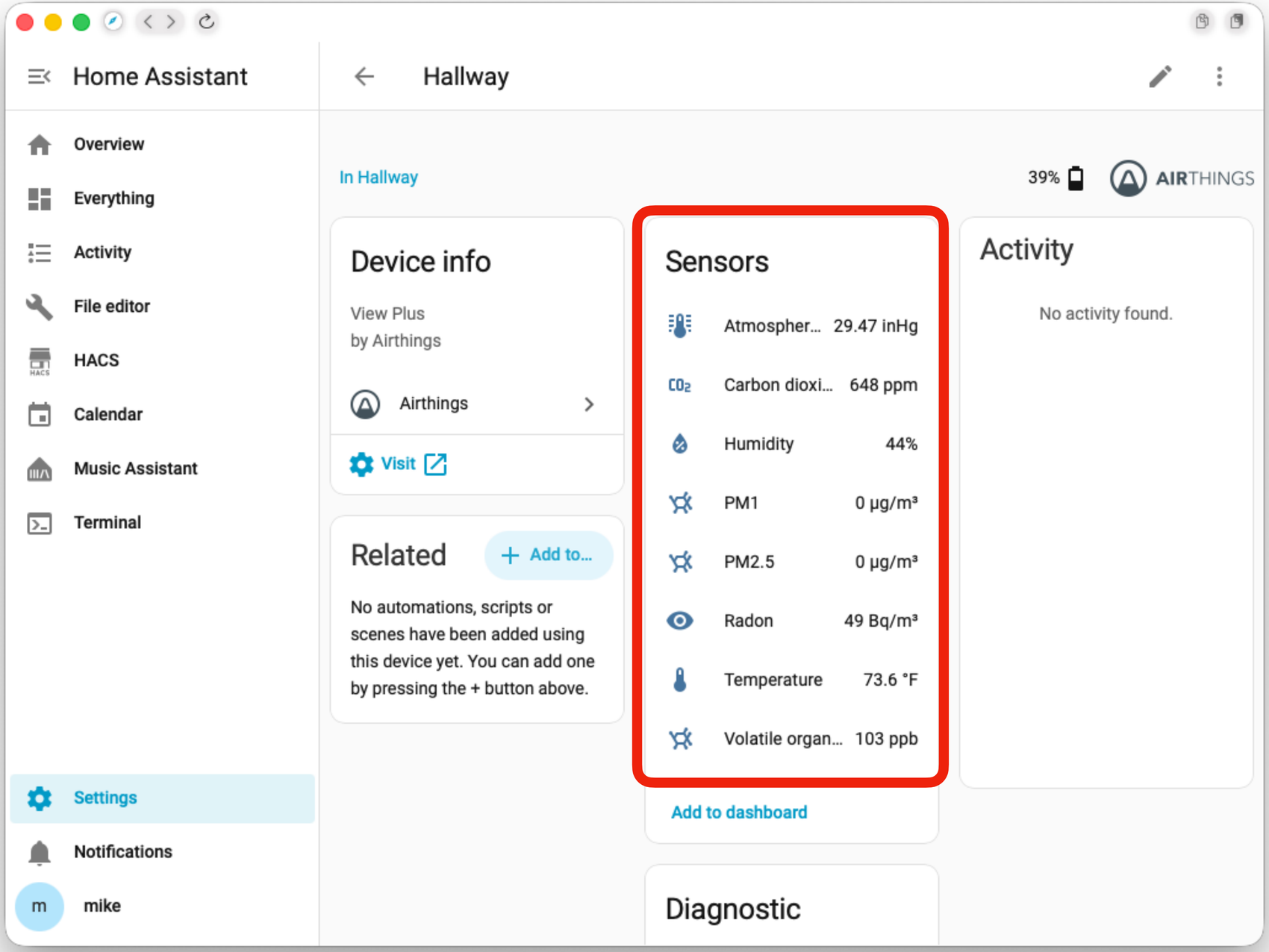
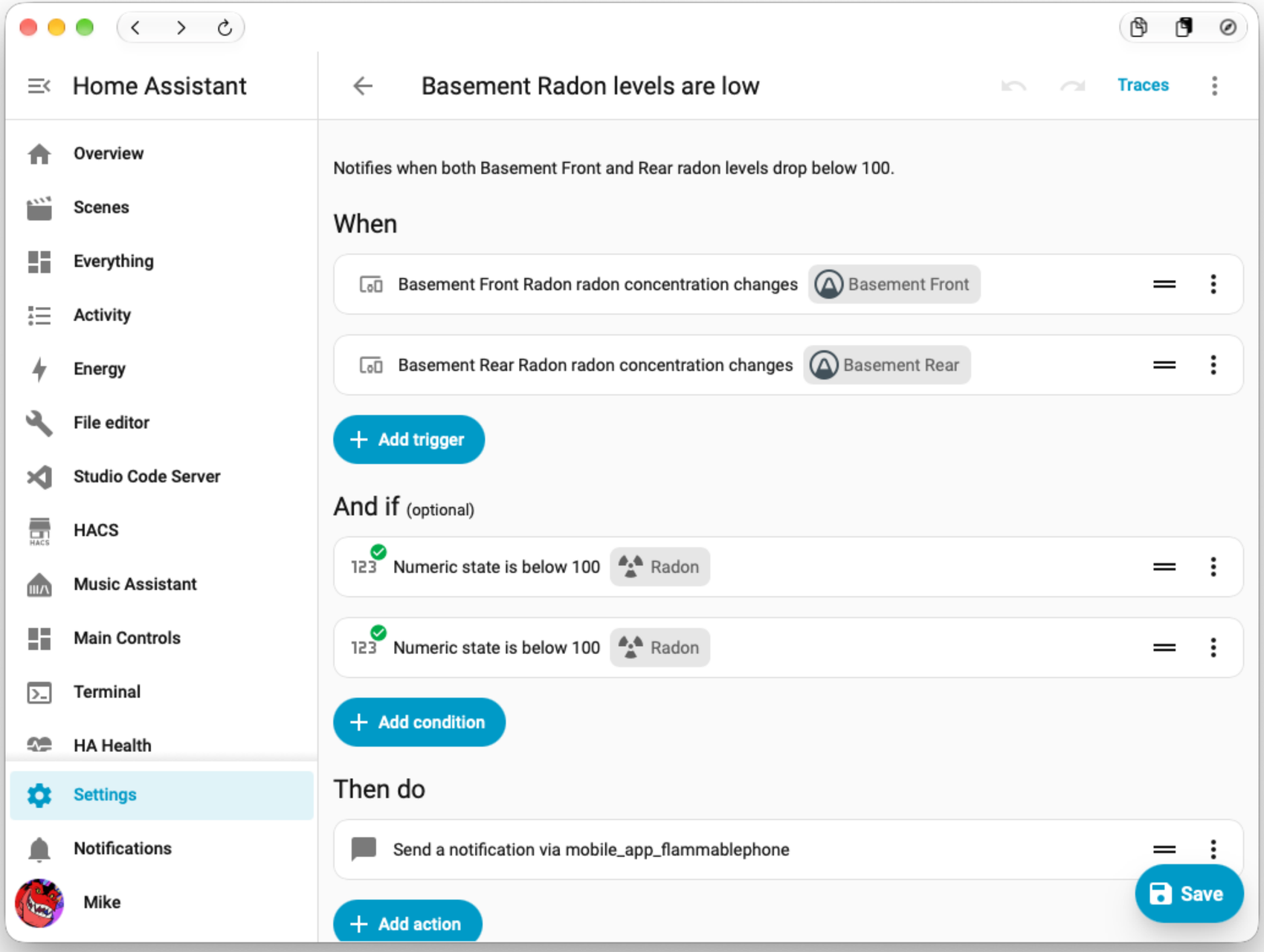
File editor
Studio Code Server
HACS
Music Assistant
Main Controls
Terminal
HA Health
Settings
Notifications
Mike
Kitchen
Lights
On
Recessed Lig...
75%
Cabinet Lights
80%
Climate
Speed Oven ...

Oven NDA16...
Off
0 °F
Media players
Speaker Left
Idle
Speaker Right
Idle
Speaker Right
Idle
Speaker Left
Idle
Kitchen Speaker Left
Favorite curre...
Unknown
Kitchen Speaker Right
Favorite curre...
Unknown
Kitchen sink
55%
Water detected
OK
Temperature
67.9 °F
Humidity
Induction Cooktop
SNGA046346...
Off
SNGA046346...
Off
SNGA046346...
SNGA046346...


Home Assistant
Overview
Everything
Activity
File editor
HACS
Calendar
Music Assistant
Terminal
Settings
Notifications
m
mike
Hallway bathroom
In Hallway Bathroom
100%
Device info
puck_v1
by Flo by Moen
Firmware: 1.2.1
Serial number:
MAC
Flo
UniFi Network
Remove device from UniFi Network
Related
Add to...
No automations, scripts or scenes have been added using this device yet. You can add one by pressing the + button above.
Sensors
Battery 100%
Humidity 51.6%
Temperature 73.3 °F
Water detected OK
Add to dashboard
Diagnostic
Hallway Bathroo... Away
Add to dashboard
Activity
June 20, 2026
Hallway bathroom Hallway Bathroom
was detected away
2:06:42 PM - 1 hour ago
Hallway bathroom Hallway Bathroom
was detected at home
1:56:24 PM - 1 hour ago
Hallway bathroom Hallway Bathroom
was detected away
12:08:40 PM - 3 hours ago
Hallway bathroom Hallway Bathroom


Home Assistant
Overview
Everything
Activity
File editor
HACS
Calendar
Music Assistant
Terminal
Settings
Notifications
m
mike
Hallway
In Hallway
39%
AIRTHINGS
Device info
View Plus
by Airthings
Airthings
Visit
Related
Add to...
No automations, scripts or scenes have been added using this device yet. You can add one by pressing the + button above.
Sensors
Atmospher... 29.47 inHg
Carbon dioxi... 648 ppm
Humidity 44%
PM1 0 µg/m³
PM2.5 0 µg/m³
Radon 49 Bq/m³
Temperature 73.6 °F
Volatile organ... 103 ppb
Add to dashboard
Activity
No activity found.
Diagnostic

Automations


Home Assistant
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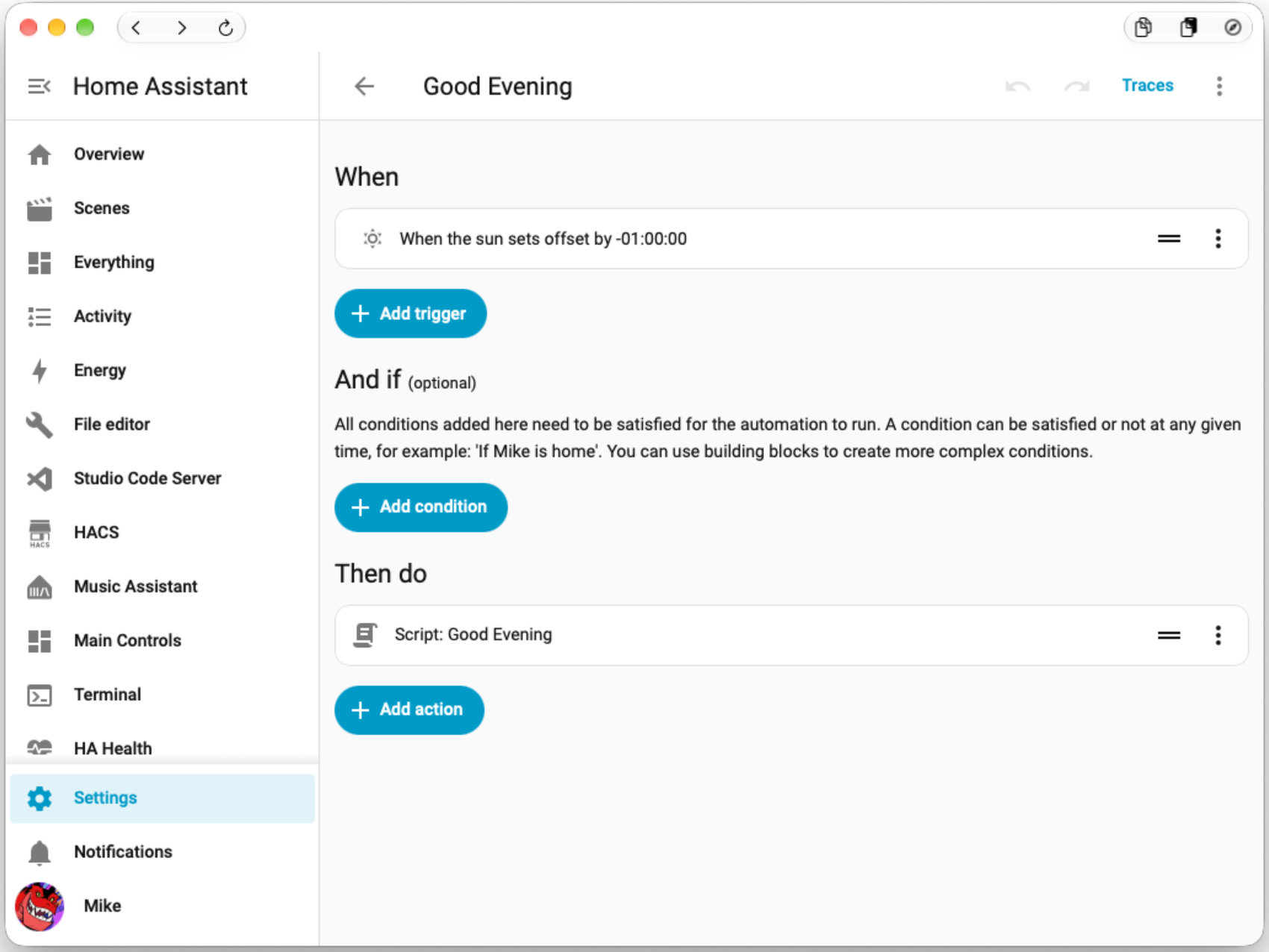
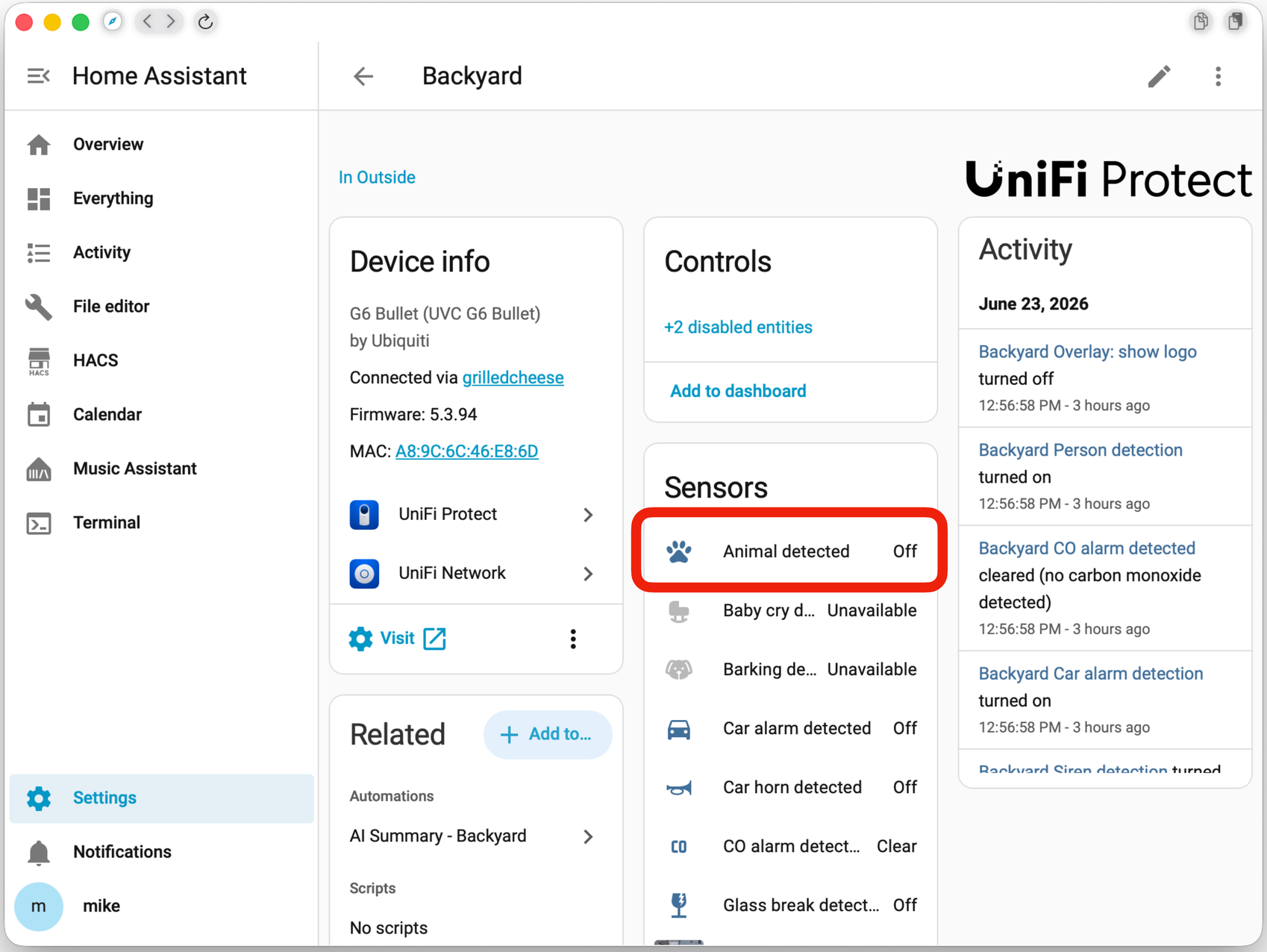
Music Assistant
Main Controls
Terminal
HA Health
Settings
Notifications
Mike
Basement Radon levels are low
Traces
Notifies when both Basement Front and Rear radon levels drop below 100.
When
Basement Front Radon radon concentration changes
Basement Front
Basement Rear Radon radon concentration changes
Basement Rear
Add trigger
And if (optional)
Numeric state is below 100
Radon
Numeric state is below 100
Radon
Add condition
Then do
Send a notification via mobile_app_flammablephone
Add action
Save


Home Assistant
Overview
Scenes
Everything
Activity
Energy
File editor
Studio Code Server
HACS
Music Assistant
Main Controls
Terminal
HA Health
Settings
Notifications
Mike
Good Evening
Traces
When
When the sun sets offset by -01:00:00
Add trigger
And if (optional)
All conditions added here need to be satisfied for the automation to run. A condition can be satisfied or not at any given time, for example: 'If Mike is home'. You can use building blocks to create more complex conditions.
Add condition
Then do
Script: Good Evening
Add action

Automation Idea


2026-06-12 06:03:36 PM | Backyard


Home Assistant
Overview
Everything
Activity
File editor
HACS
Calendar
Music Assistant
Terminal
Settings
Notifications
m
mike
Backyard
In Outside
UniFi Protect
Device info
G6 Bullet (UVC G6 Bullet)
by Ubiquiti
Connected via grilledcheese
Firmware: 5.3.94
MAC: A8:9C:6C:46:E8:6D
UniFi Protect
UniFi Network
Visit
Related
Add to...
Automations
AI Summary - Backyard
Scripts
No scripts
Controls
+2 disabled entities
Add to dashboard
Sensors
Animal detected Off
Baby cry d... Unavailable
Barking de... Unavailable
Car alarm detected Off
Car horn detected Off
CO alarm detect... Clear
Glass break detect... Off
Activity
June 23, 2026
Backyard Overlay: show logo
turned off
12:56:58 PM - 3 hours ago
Backyard Person detection
turned on
12:56:58 PM - 3 hours ago
Backyard CO alarm detected
cleared (no carbon monoxide detected)
12:56:58 PM - 3 hours ago
Backyard Car alarm detection
turned on
12:56:58 PM - 3 hours ago

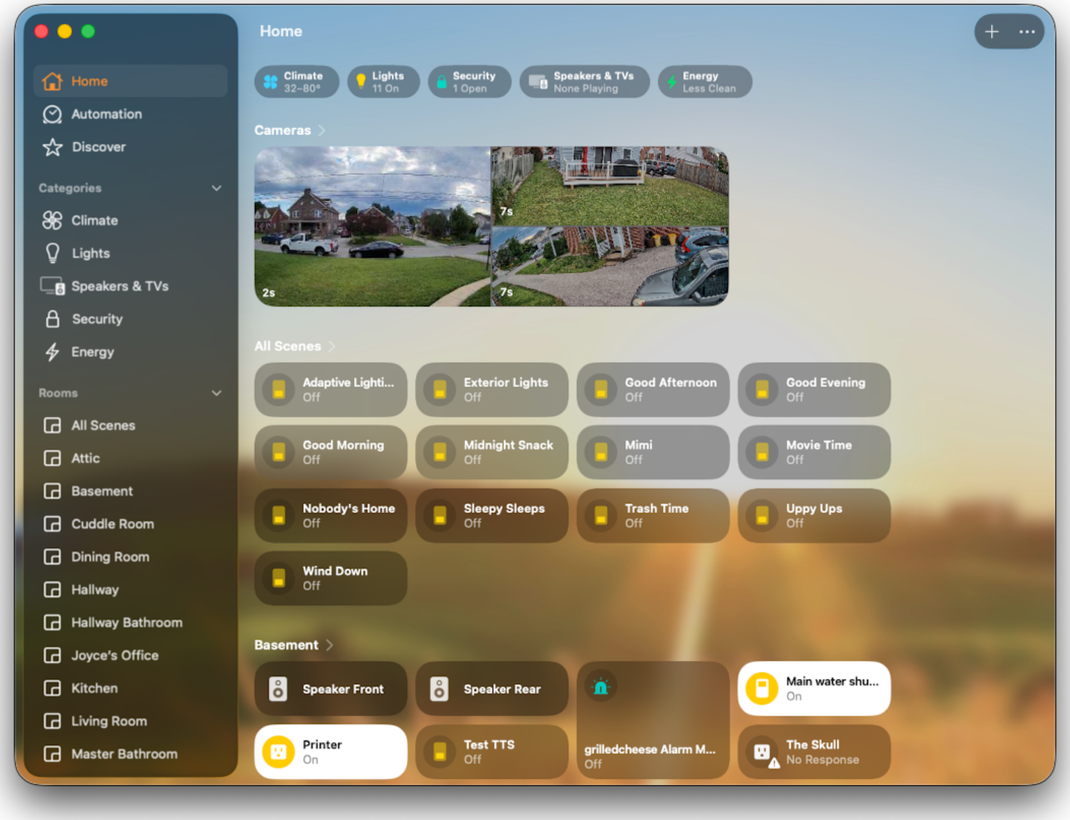

eve

What about HomeKit?

HomeKit

We still use HomeKit for Siri!

We also use it to manually toggle scenes from Home Assistant

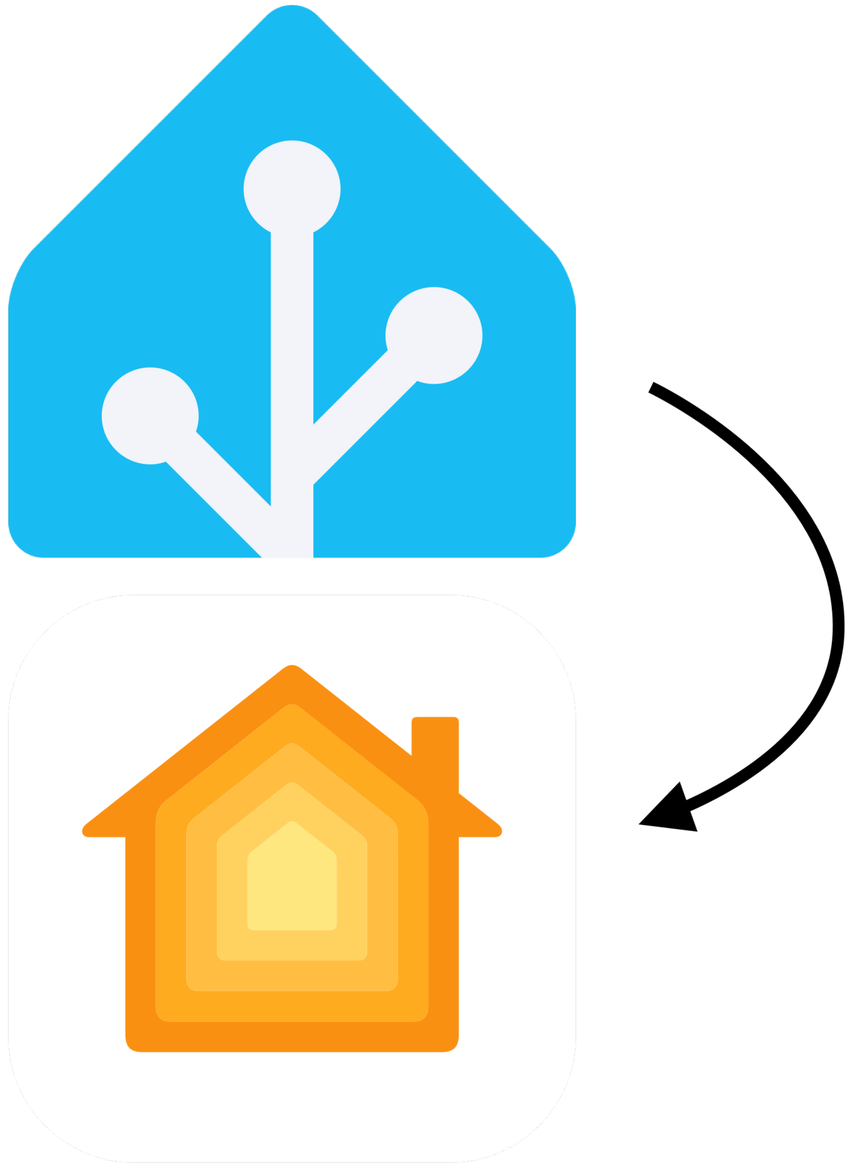



LIVE
Someone who may be Ashley rang the do
Press for full screen

HomeKit Bridge

Made the transition from HomeKit to Home Assistant approachable

Can be used to add devices from Home Assistant to HomeKit



Infrastructure

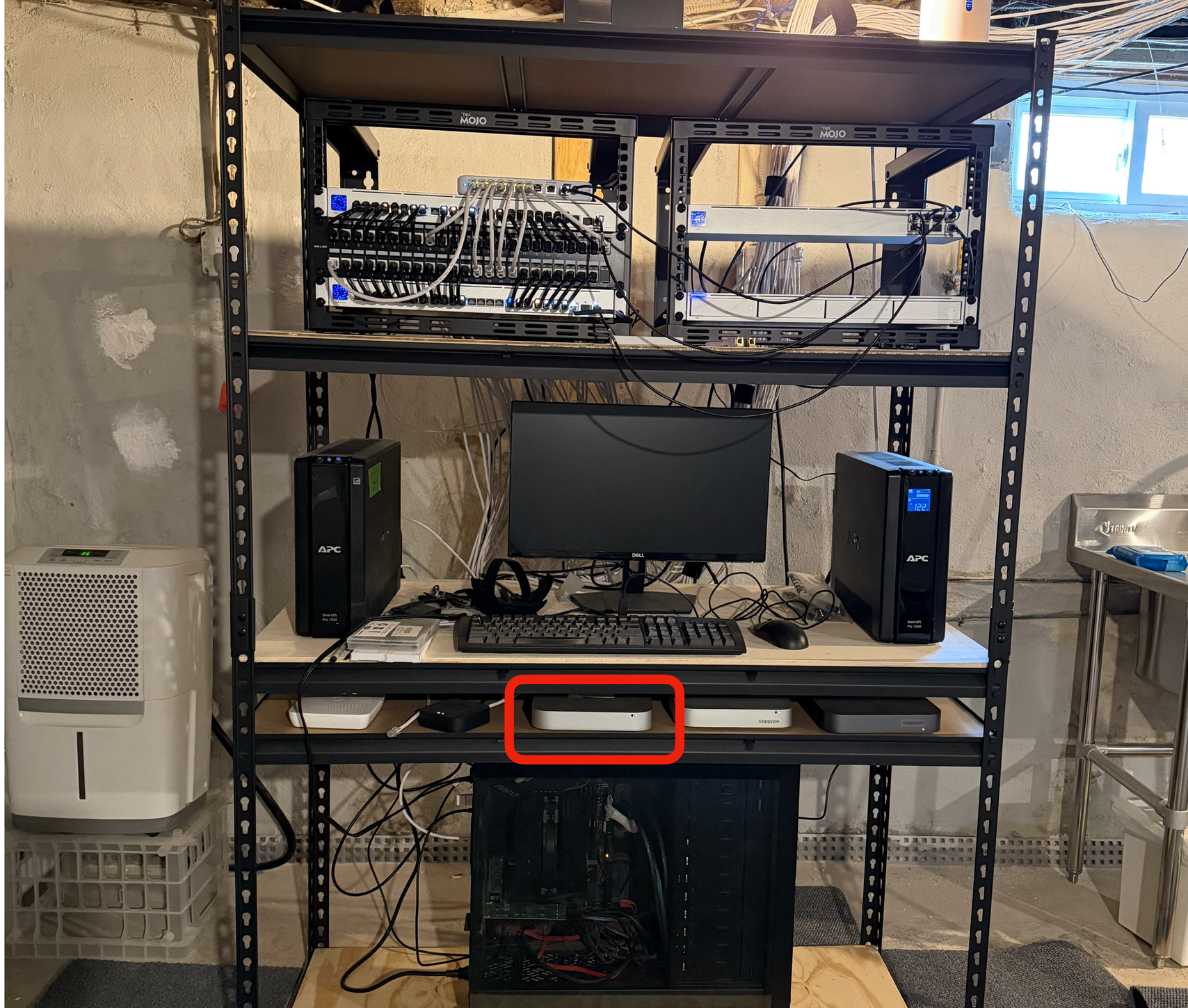
Infrastructure

My smart home cannot be contained

- I ❤️ Docker
- However, the best way to run Home Assistant is on dedicated hardware



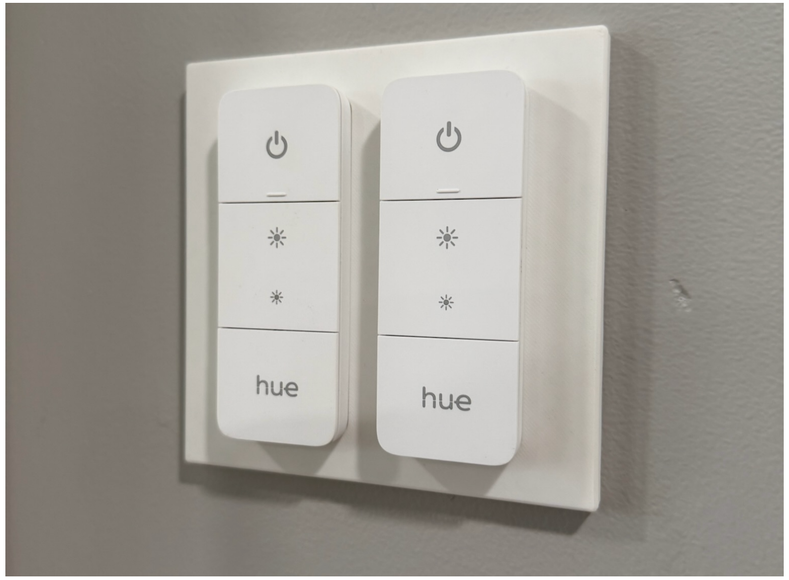



MOJO
MOJO
APC
APC
DELL

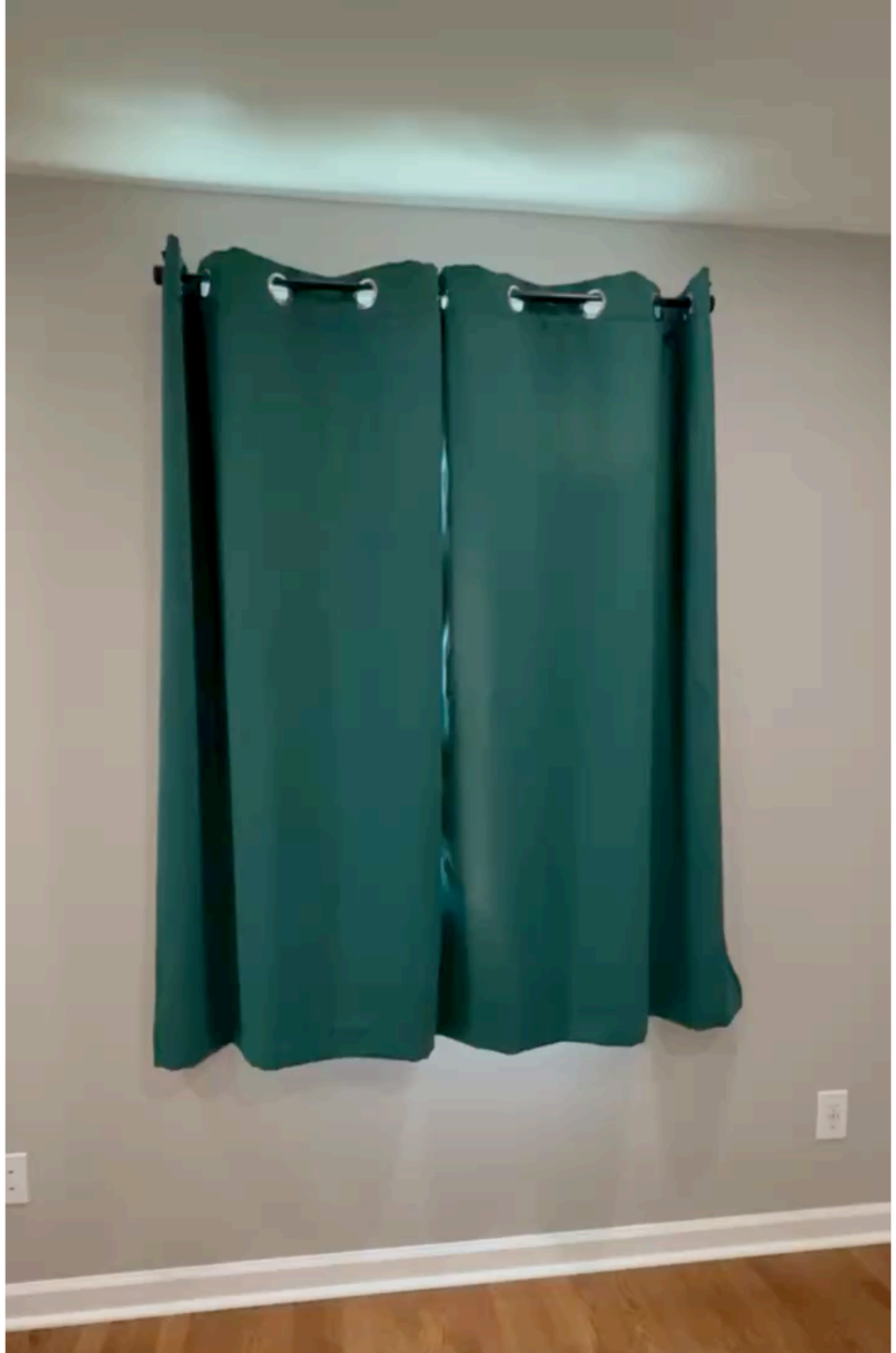
What’s next?

Recent upgrades




hue
hue







Coming soon

Smart home getting smarter

- Making “dumb” devices smart
  - Infrared (IR)
  - Radio frequency (RF)
  - Bluetooth (via ESPHome)
- More Matter over Thread devices
- Improving my Zigbee network
  - Connecting Hue remotes directly to the lights if HA is down
- Smoke detectors
- Dishwasher
- High Availability / Failover

Resources

DIY

- https://mikesolin.com/category/smart-home/
- https://www.home-assistant.io/
- https://www.reddit.com/r/homeassistant/
- They also have a Discord server!

Thank you, University of Utah!