

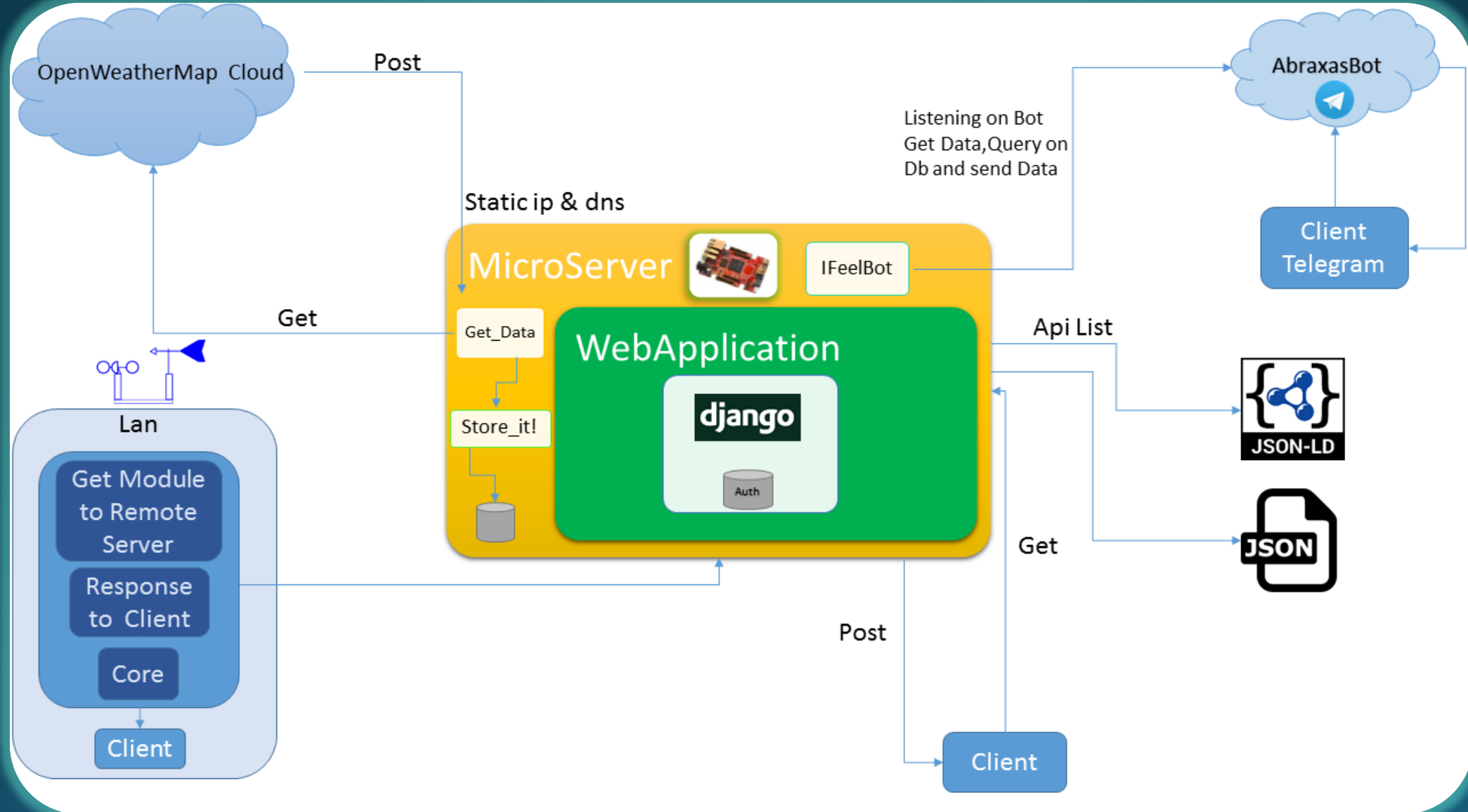
Riccardo La Grassa

WeatherLink

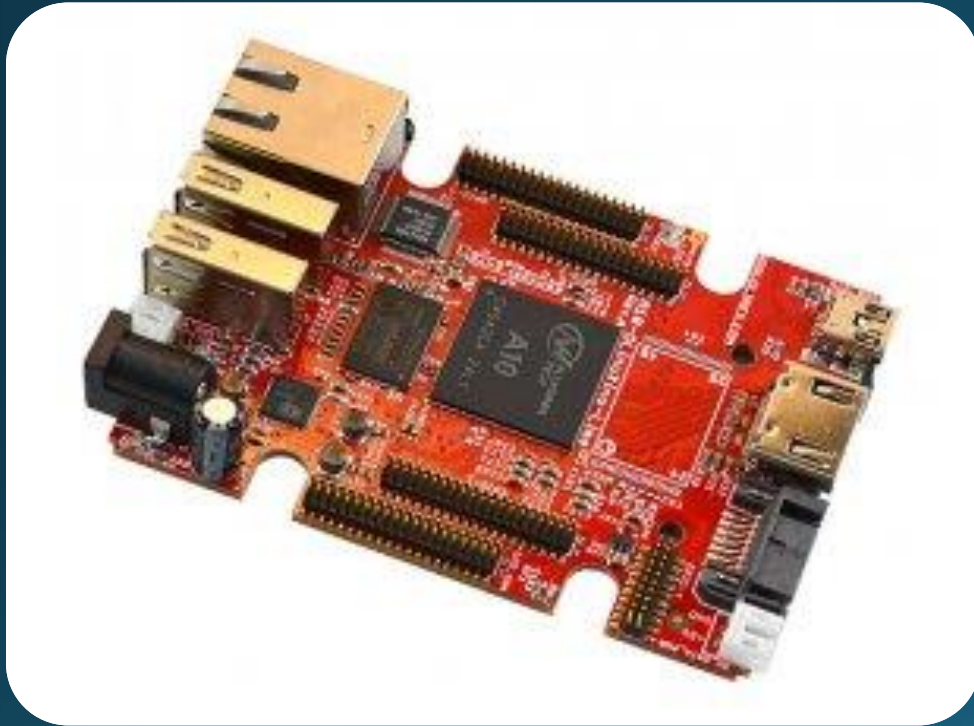
Index

- › Overview
- › Server at Home
- › Build anemometer & Physical concept
- › Material used
- › WeatherLink Platform (Overview)
- › The importance of linked-data

Overview



Server



- Board: Olimex A10 Why?

Because it's a low cost and a low consume, but also it's a low performance

Good idea for IoT project

SATA connector

HDMI FullHD 1080p

160 GPIOs

Anemometer



Price: **\$84.24** & **FREE Shipping**. [Details](#)

Only 8 left in stock - order soon.

Want it tomorrow, May 26? Order within **7 hrs 28 mins** and choose **One-Day** checkout. [Details](#)

Sold by [D Marketing Corp](#) and [Fulfilled by Amazon](#). Gift-wrap available.

- Battery powered - last for months continuous use
- Accurate (3 to 4% of reading or +/- 1mph)
- 1 second update rate for gusts
- Captures Max and Average
- Dual digital display can be hundreds of feet away

Used & new (5) from **\$58.31** & **FREE shipping**.

DAVIS & SANFORD

*Lightweight Ball
Head Tripod*

Shop now



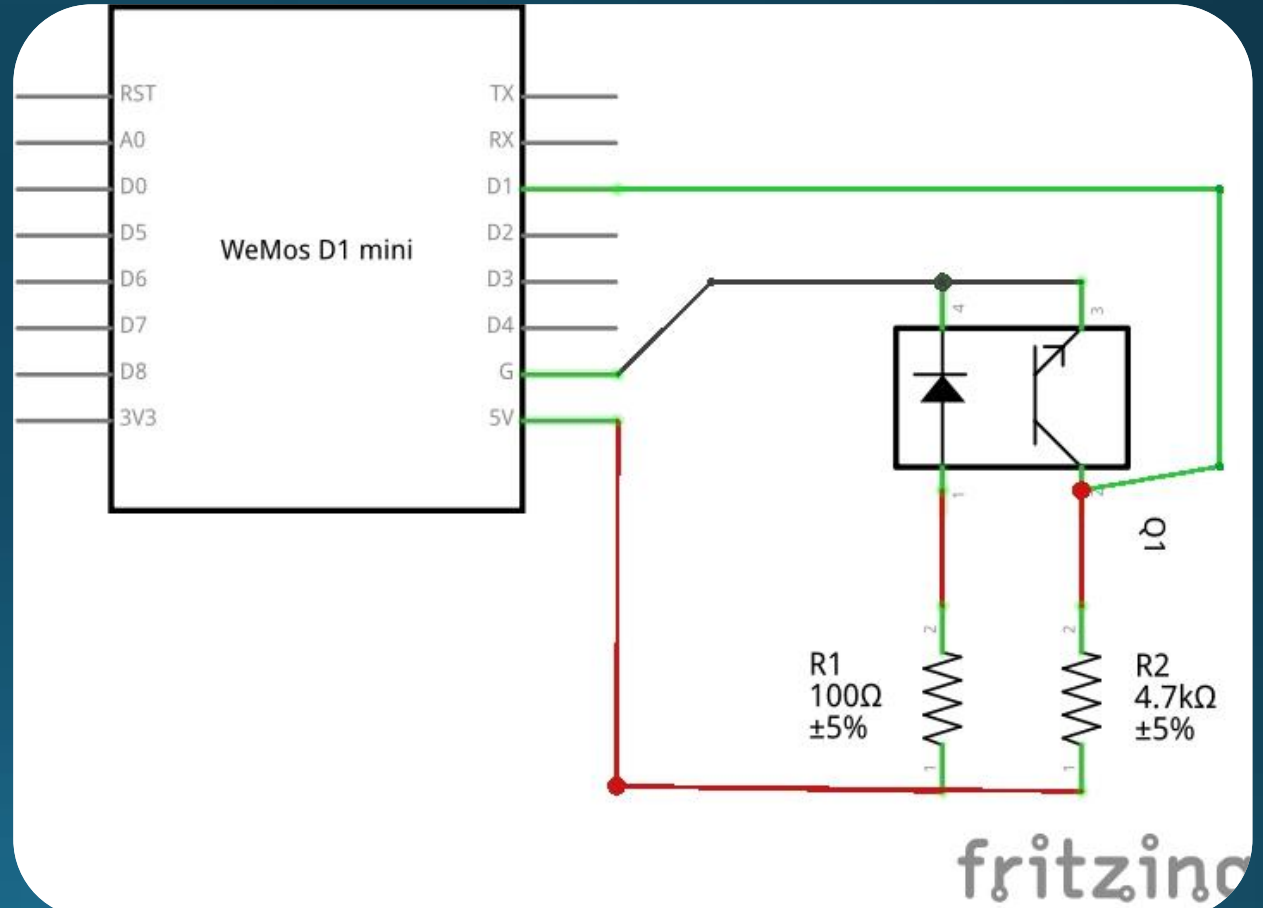
Davis & Sanford
TR553-P228 T
Super Compact



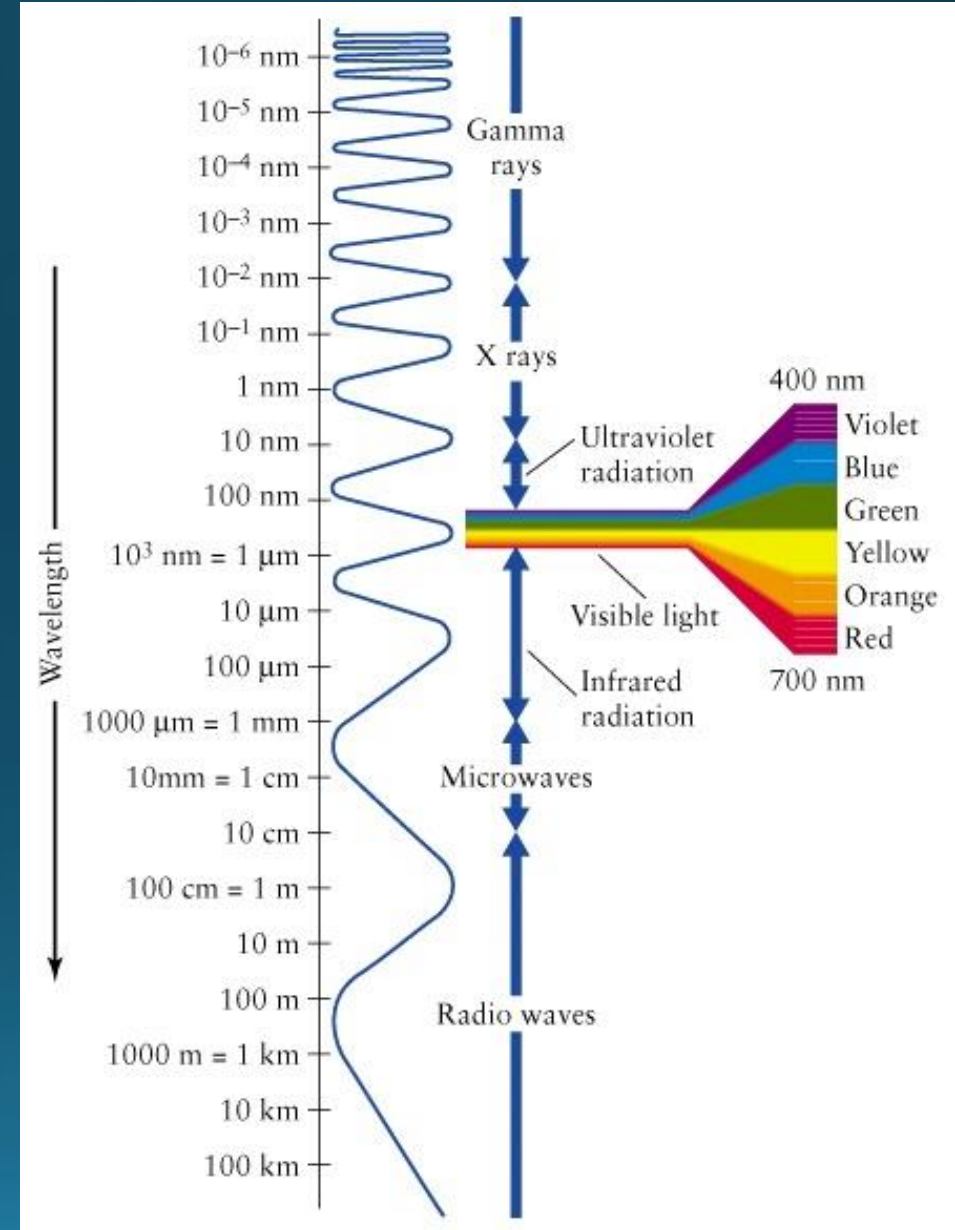
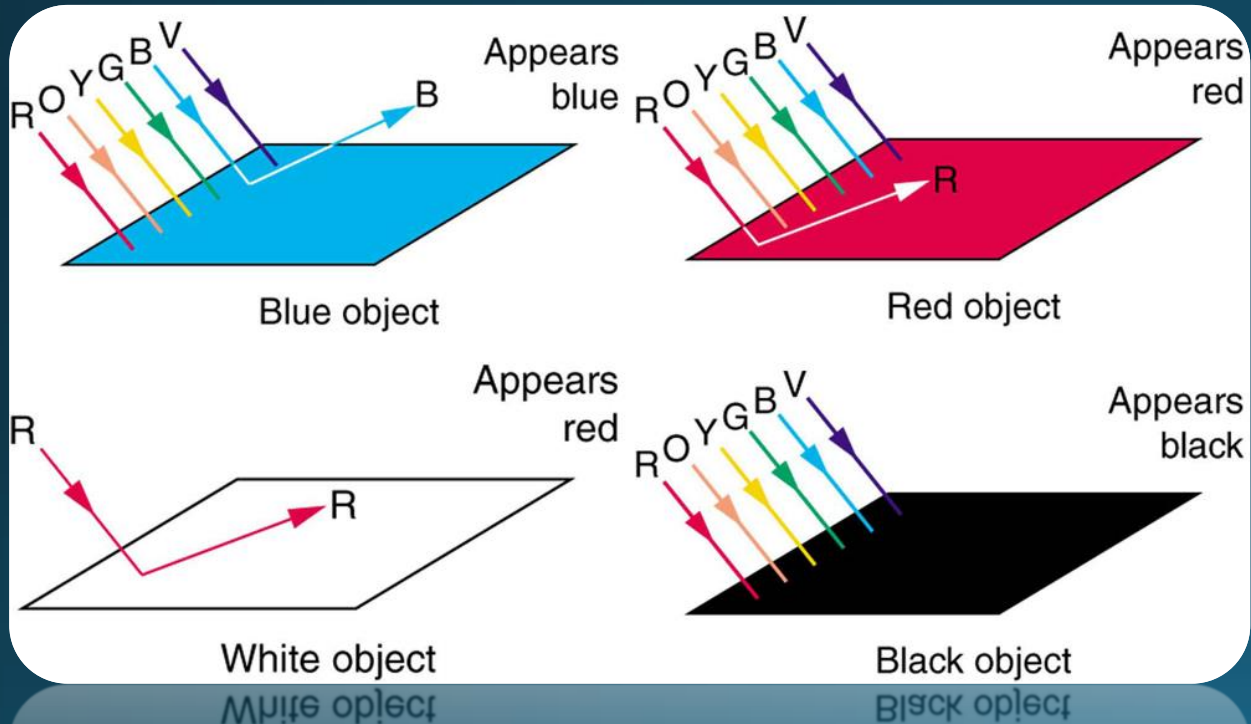
~~\$140.00~~ **\$90.00**



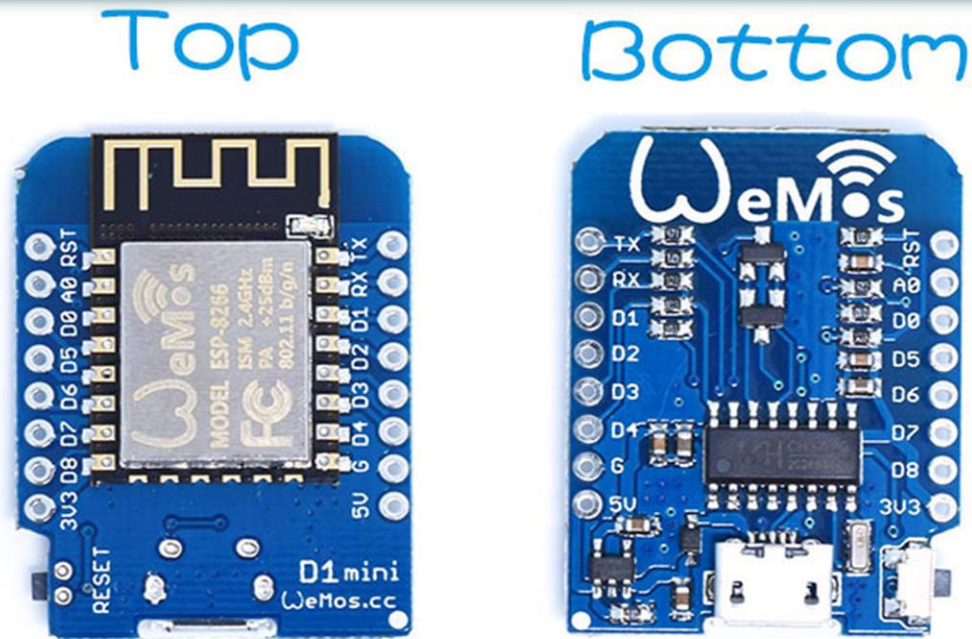
Optical sensor: TCRT5000



The Reflection



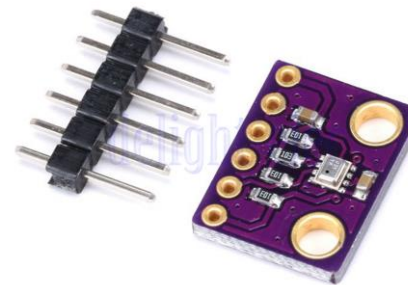
Board: Wemos d1



Optical sensor



Temp/Hum sensor

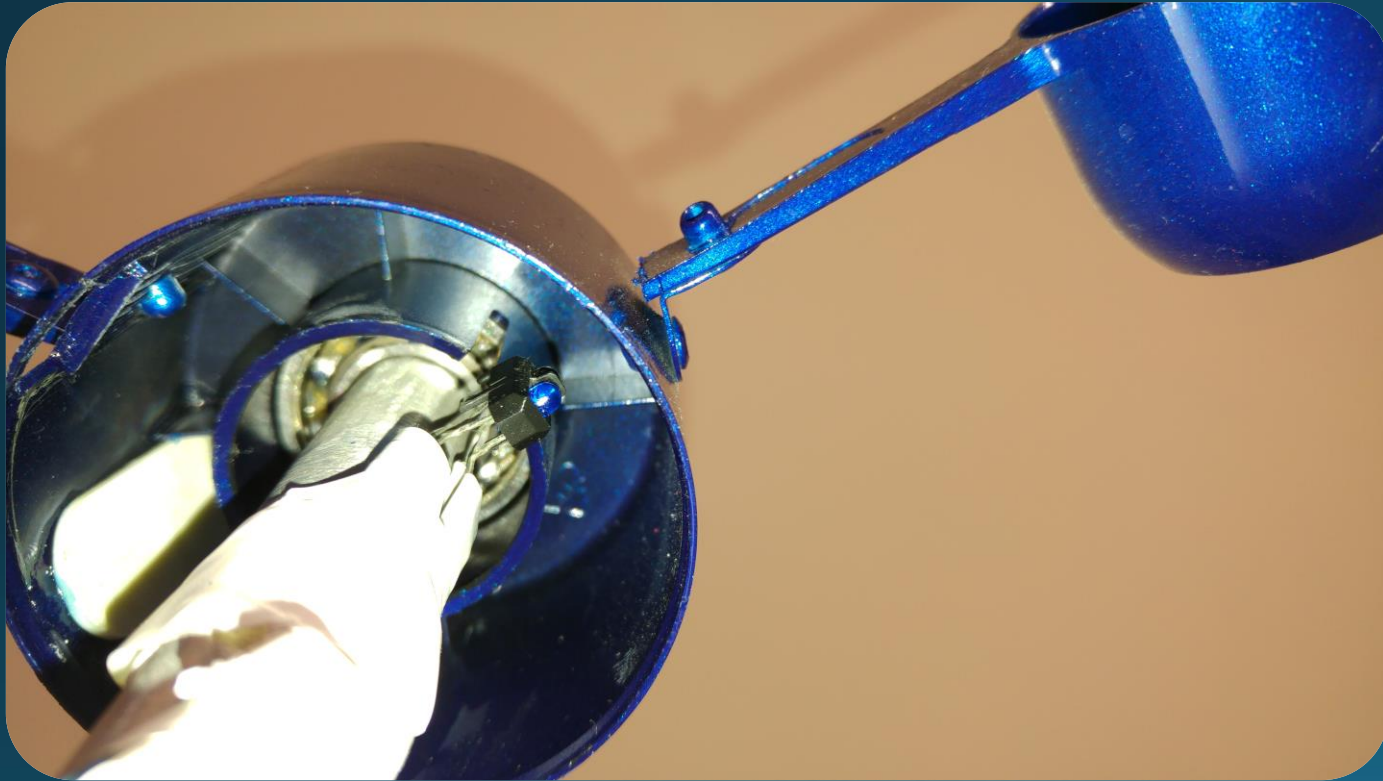


Pressure sensor



ball bearing

Optical sensor



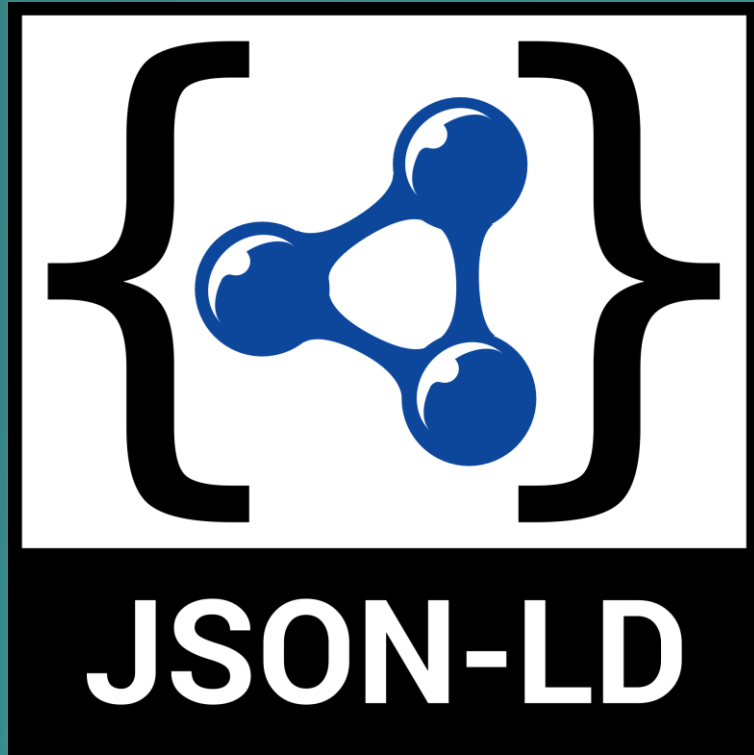
Weather Station

Web Application

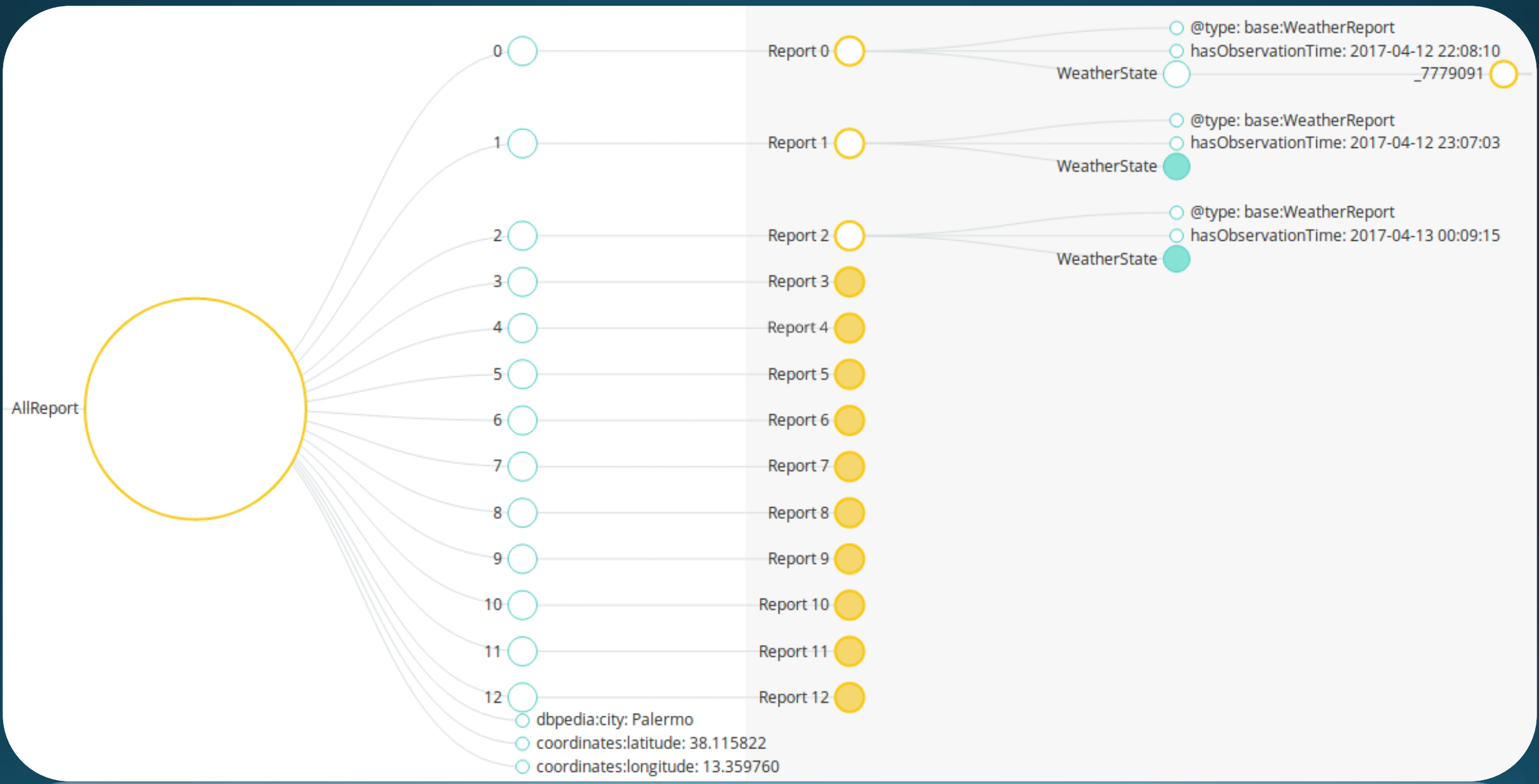
The Django logo, featuring the word "django" in a white, lowercase, sans-serif font, centered within a dark green rectangular box with a thin green border.

- Python
- Design MVC
- Information Retrieval from DB
- Authentication Users
- Sign up Weather Stations
- Plotting Data
- Api 1.0 (Json,Json Linked Data)
- RealTime Data (From Weather stations and OpenWeatherMap) on OpenStreetMap

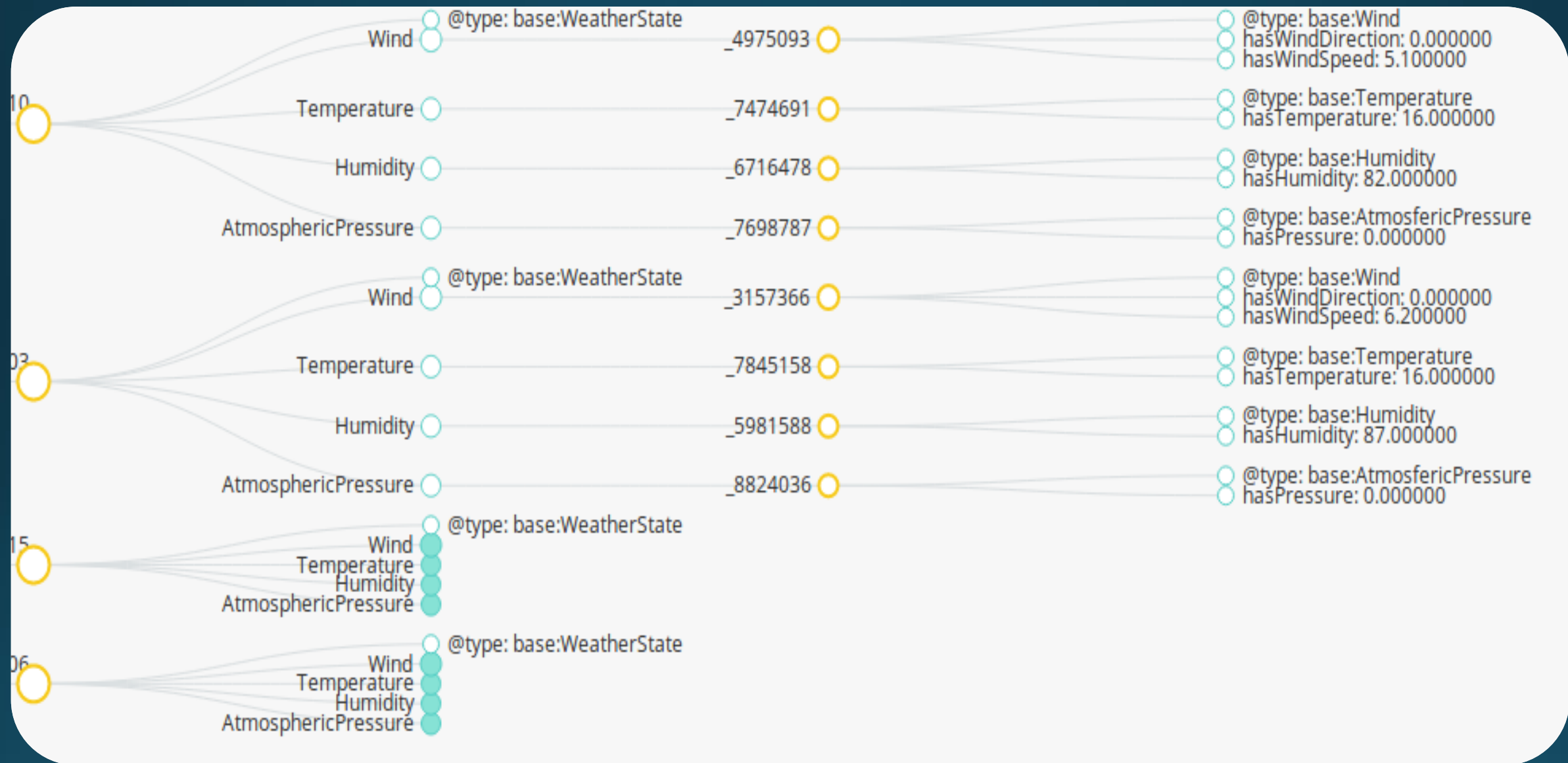
Linked-Data



Why this is important?



dbpedia:city: Palermo
coordinates:latitude: 38.115822
coordinates:longitude: 13.359760
coolqiu9r62:jou8jrnq6: 13'328100
coolqiu9r62:j9nrnq6: 38'112855
qpb6q19:clp: 69j6rwo



Conclusion

- Create a net of weather stations (built a low cost)
- Converge Data to a single point
- Create a Micro Server at home. Zero cost of third-parties
- Build the core for the information retrieval and to handle of all system
- In the future:
 - Extend the weather station with other sensors
 - Develop system to handle the Api Google Speech (Vocal commands)
 - Project and realize a system to use solar energy.