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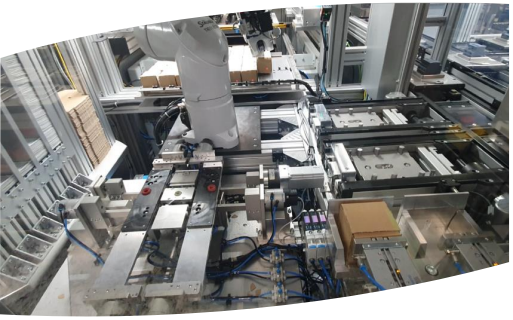
InfluxDB



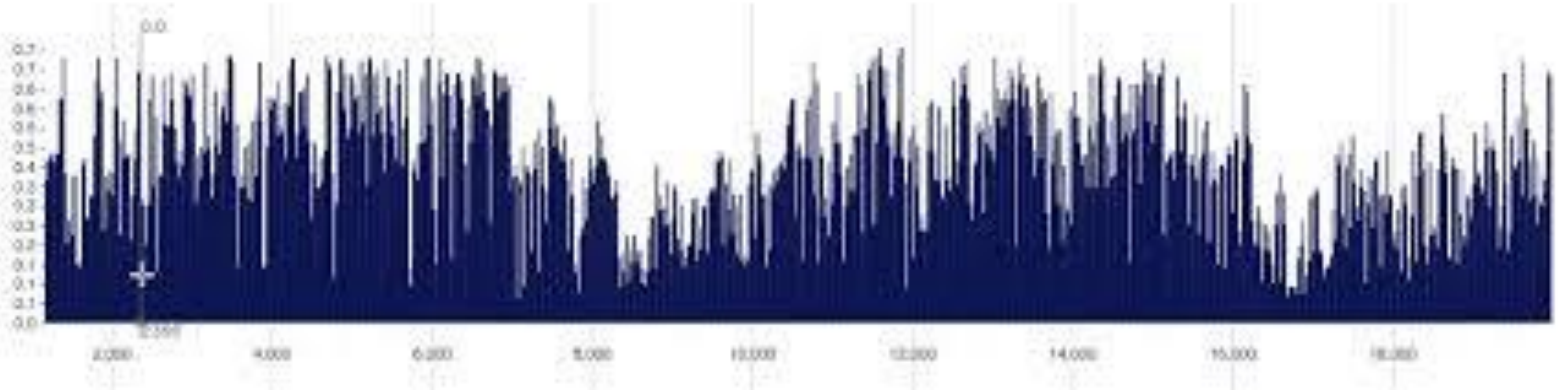
MQTT

Subscriber (Python)

influxdb

Time Series

- A time series is a sequence of data from the same source



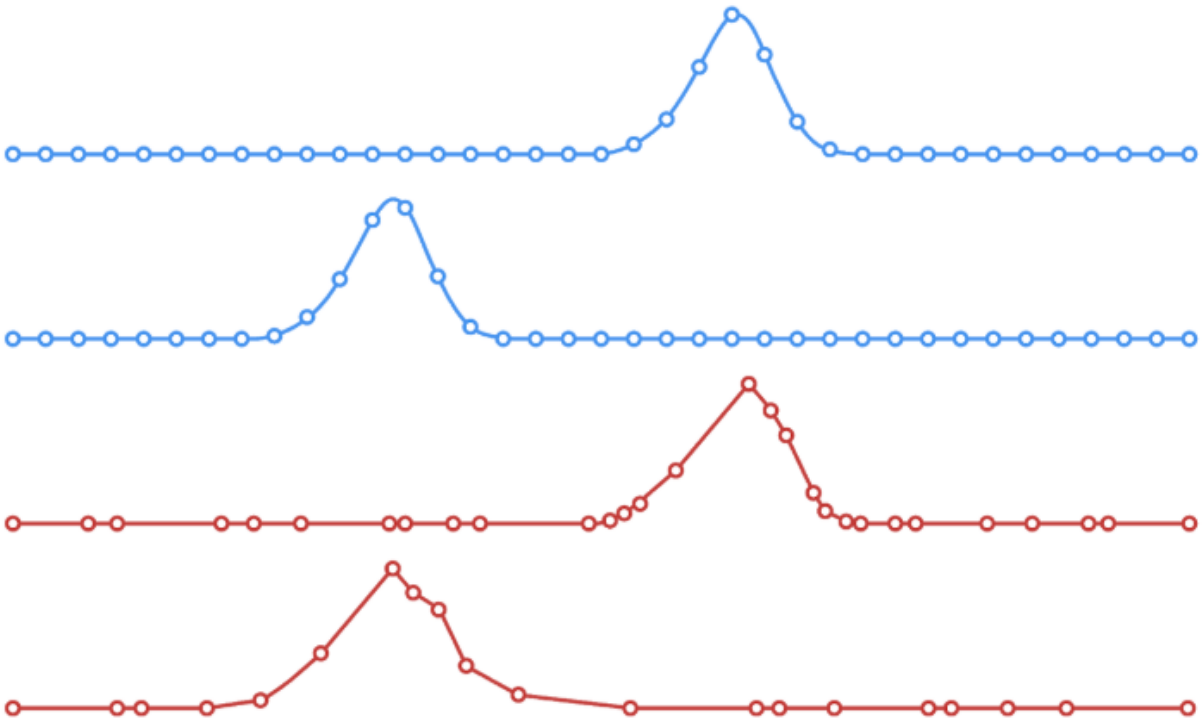
Regular vs Irregular Time Series

Metrics (Regular)

Measurements gathered at regular time intervals

Events (Irregular)

Measurements gathered at irregular time intervals



https://www.influxdata.com/what-is-time-series-data/

REGULAR VS IRREGULAR TIME SERIES

Why not using a typical Database?

- Amount of Data
  - A lot of records
  - A lot of data
- Summarization
- „Language for Timeseries“
- Time is the primary key
- Schema-free

Anatomy of InfluxDB

- An **organization** is a workspace for a group of users. All dashboards, tasks, buckets, members, etc., belong to an organization.
- **Bucket** is a location where data is store, each bucket has a retention period
- An InfluxDB **measurement** is similar to an SQL database **table**
- InfluxDB **tags** are like **indexed columns** in an SQL database
- InfluxDB **fields** are like **unindexed columns** in an SQL database
- InfluxDB **points** are similar to **SQL rows**

https://docs.influxdata.com/influxdb/v1.8/concepts/crosswalk/

Bucket

- Buckets belong to organizations

- We can set a retention to it „BucketRetentionRules"
  - Smaller period than 60 minutes is not supported
  - Infinite is possible

- We can set continues queries
  - To store a high level of aggregation values

```
SELECT mean("value") INTO
"h2o_feet_mean" FROM "h2o_feet"
GROUP BY time(1m)
```

Writing Data

- Data is stored in an organiszation, in a bucket in a measurement („table“)
- Measurement is created when writting to it
- Data can be further „Tagged“
  - A Tag is meta data

Query Data

- Flux is InfluxDB's query language