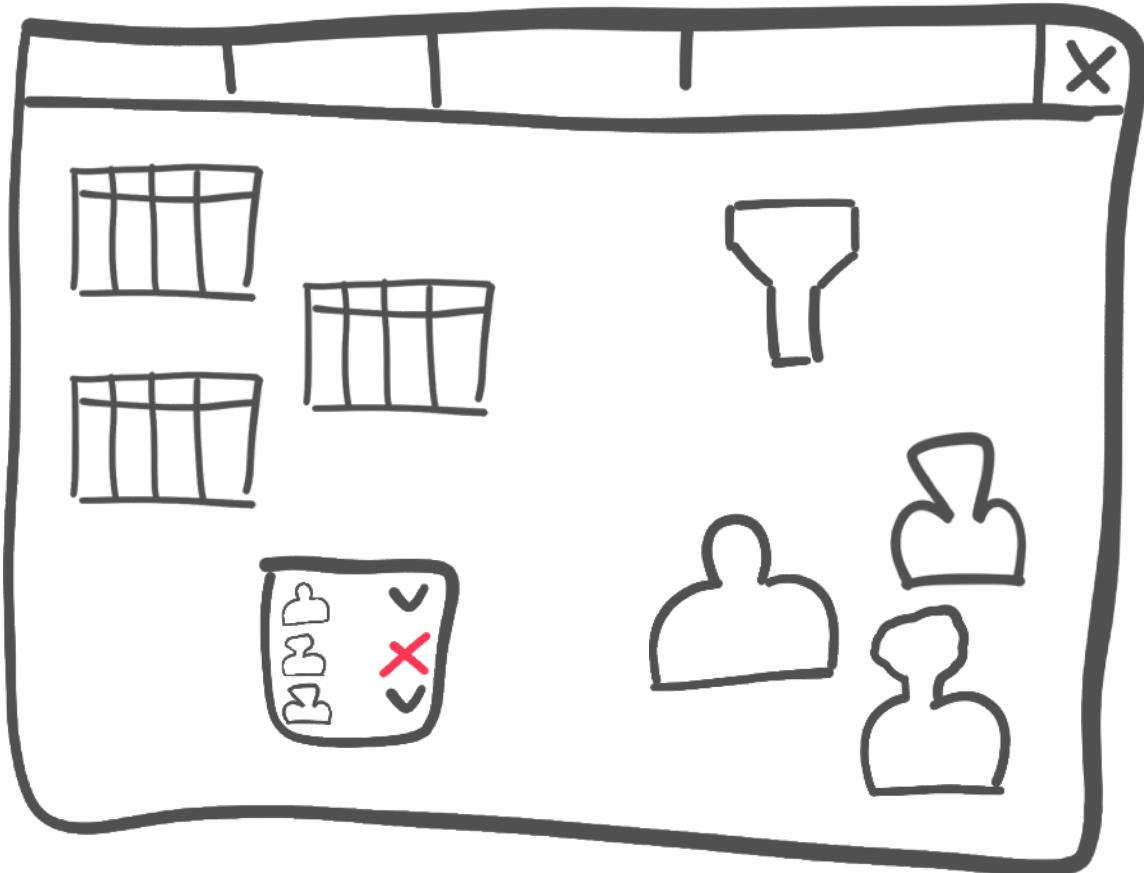


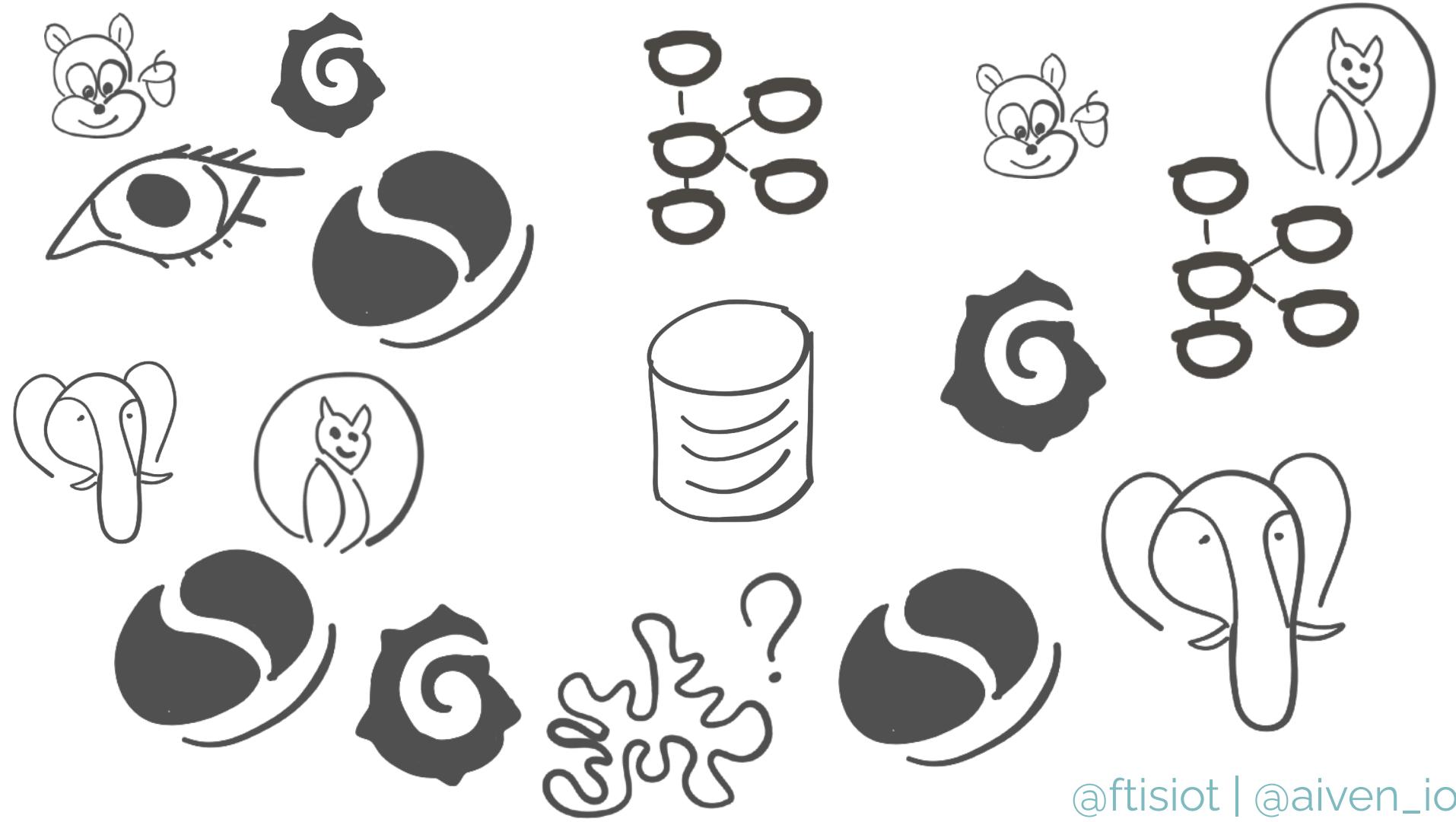


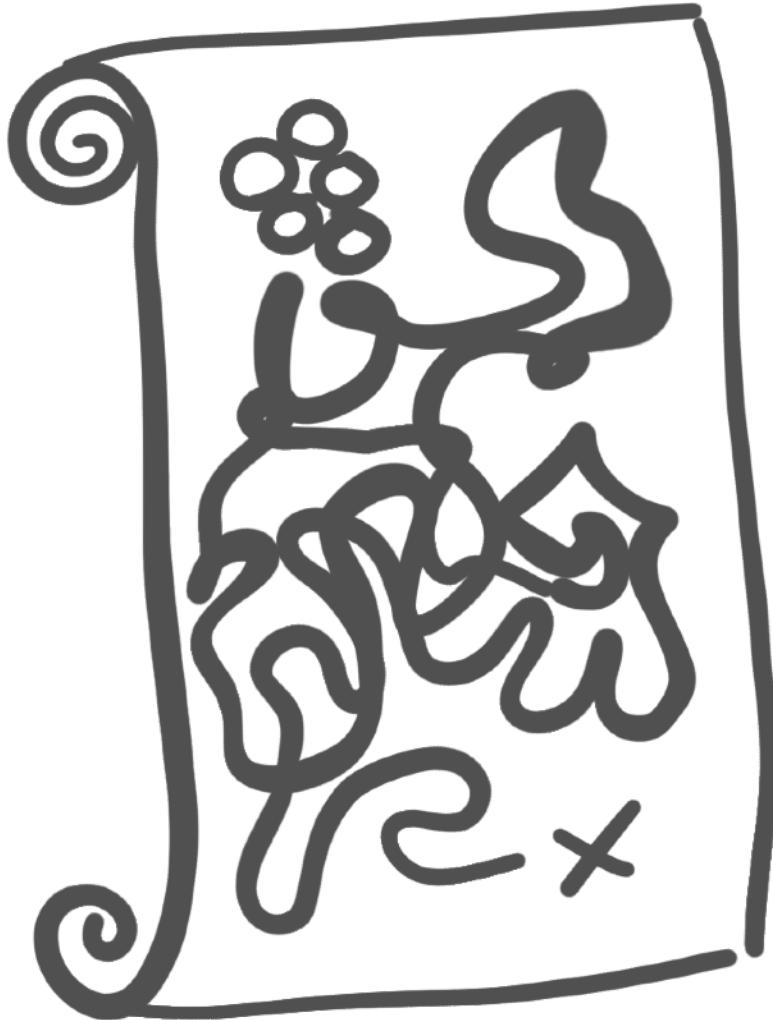
# Don't get lost in data

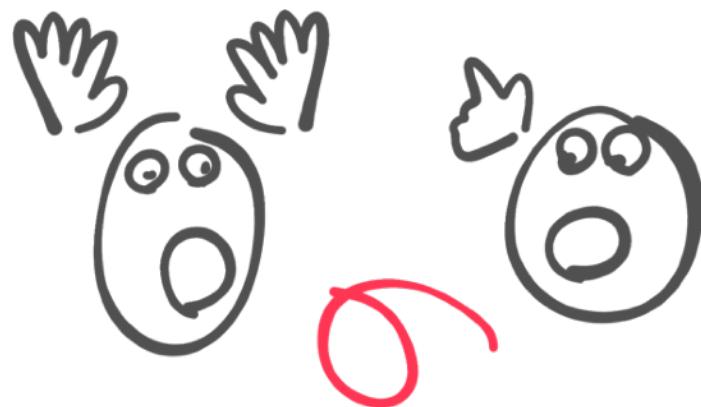
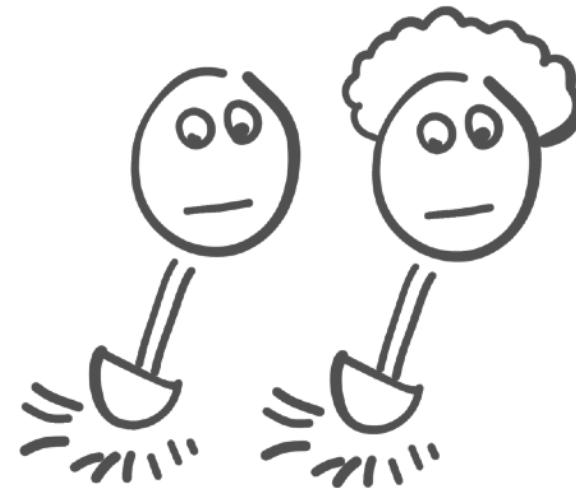


# Metadata to the rescue!

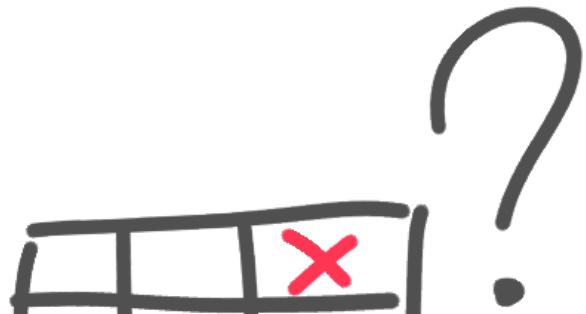








@ftisiot | @aiven\_io

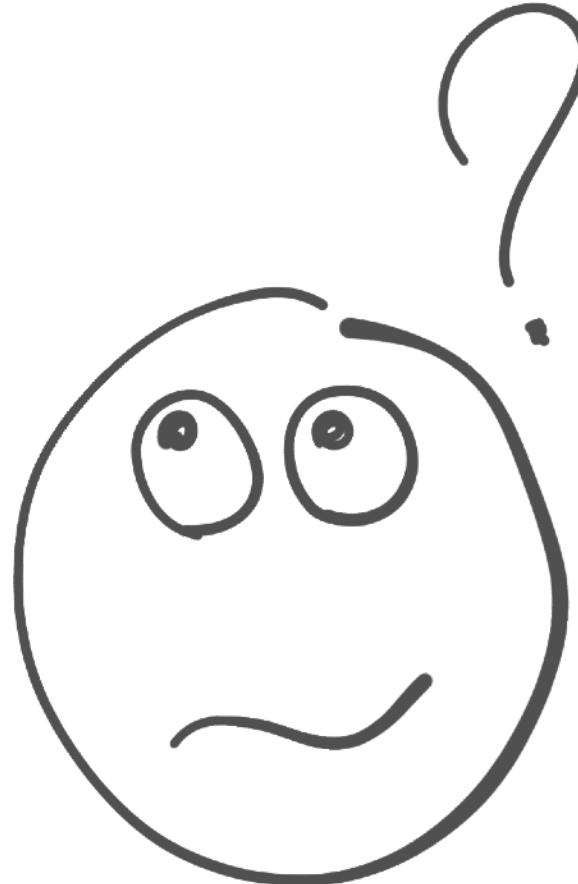


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GDPR

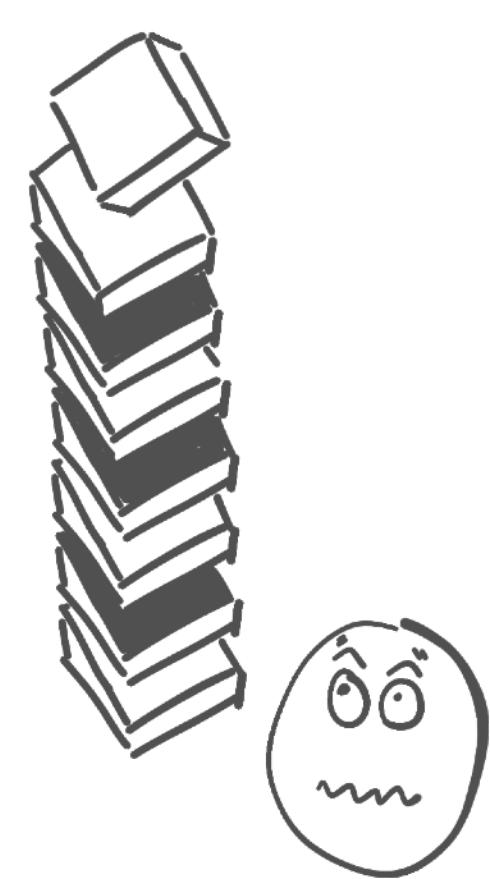
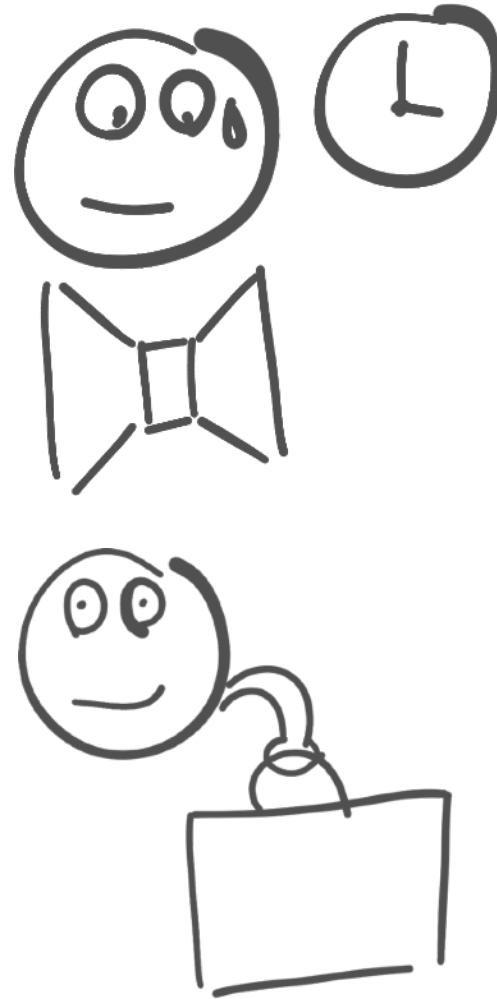
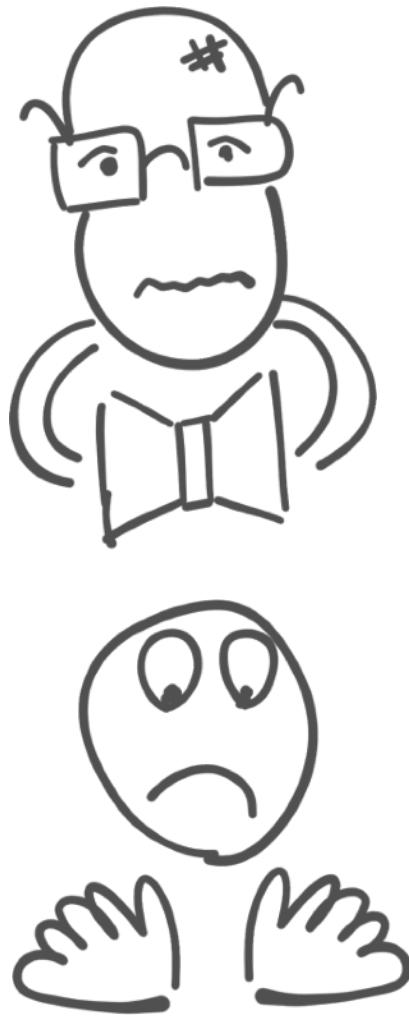


# How to fix?



# Docs FTW!





@ftisiot | @aiven\_io

# How to fix, please?



# Look around!



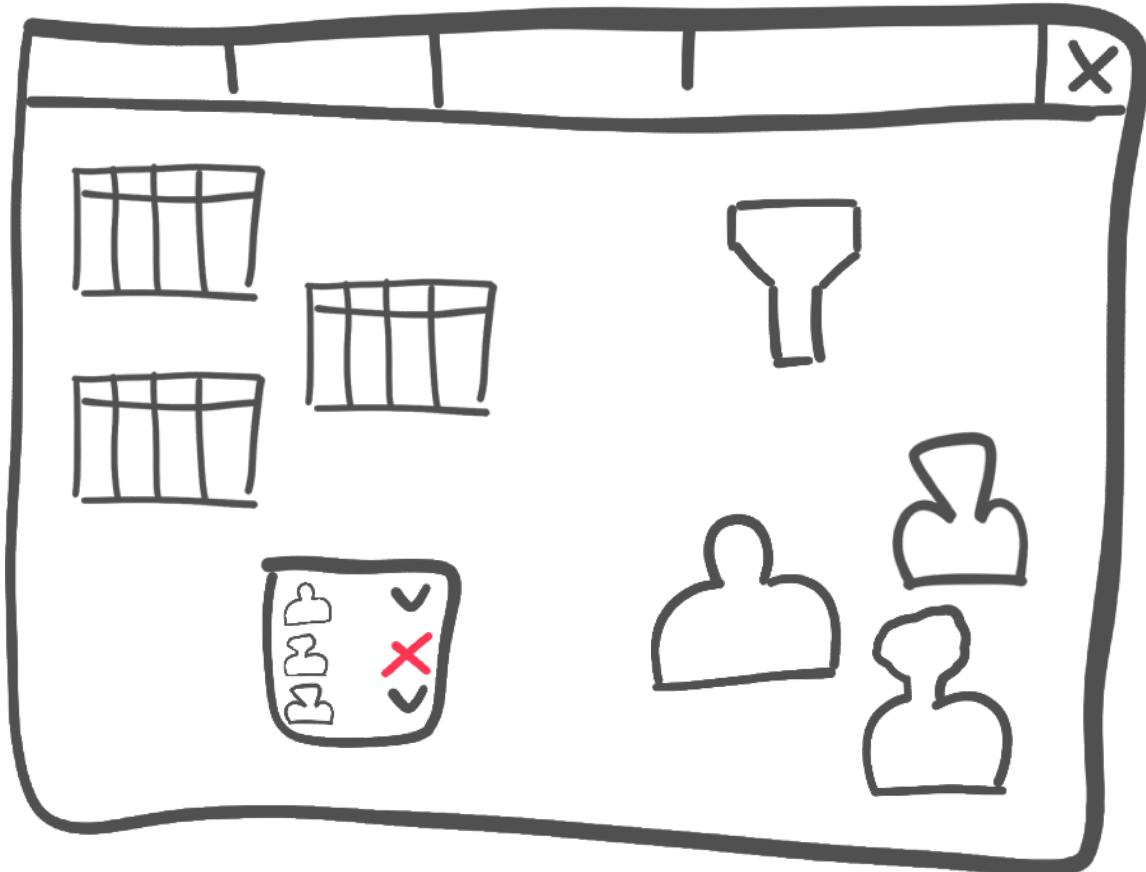
# MetaData

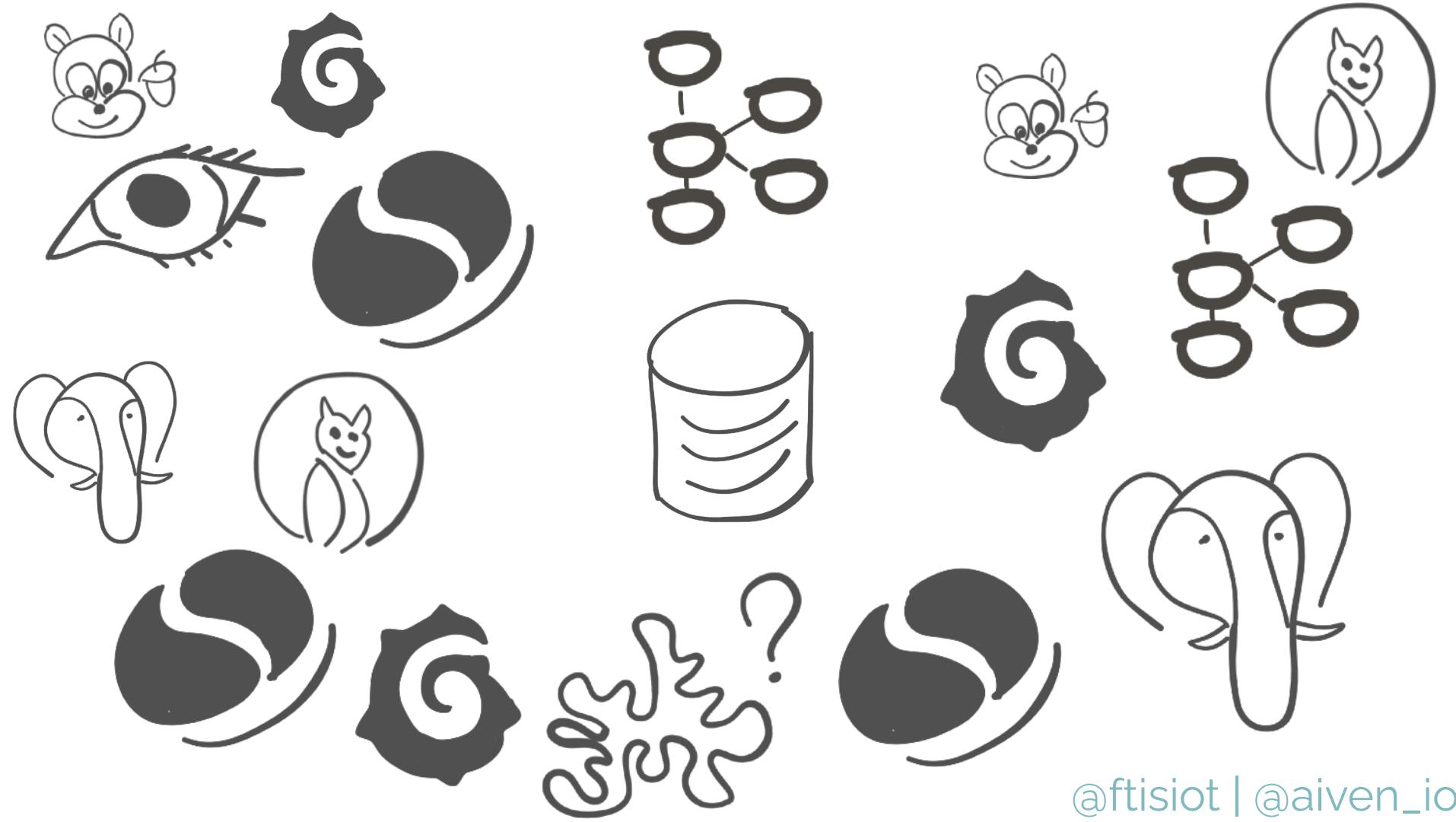


## Beyond

<https://www.kaggle.com/datasets/unsdsn/world-happiness>

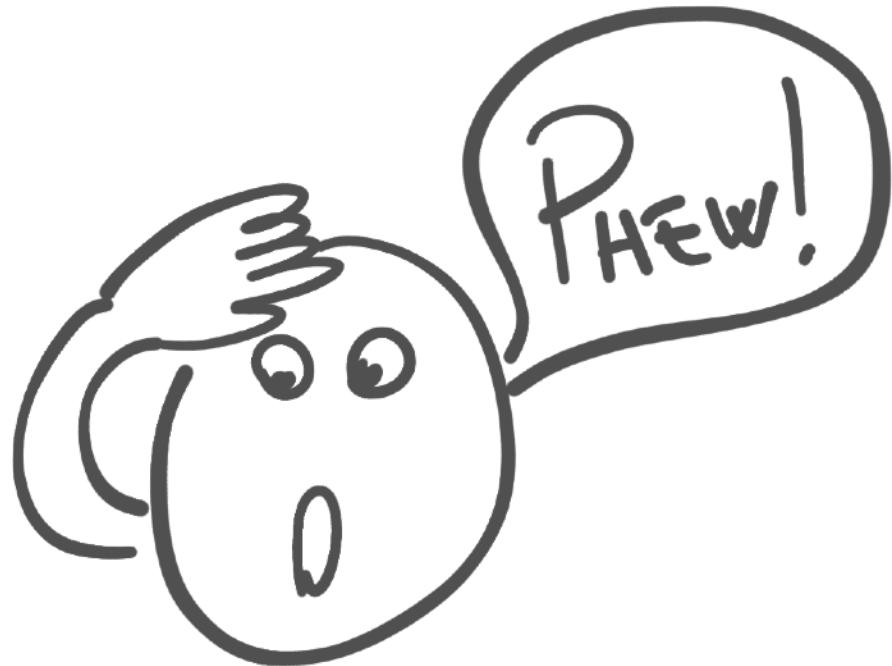
| Rank | Country | Score | GDP per capita | Social support |
|------|---------|-------|----------------|----------------|
| 1    | Finland | 7.769 | 1.340          | 1.587          |
| 2    | Denmark | 7.600 | 1.383          | 1.573          |
| 3    | Norway  | 7.554 | 1.488          | 1.582          |
| 4    | Iceland | 7.494 | 1.380          | 1.624          |



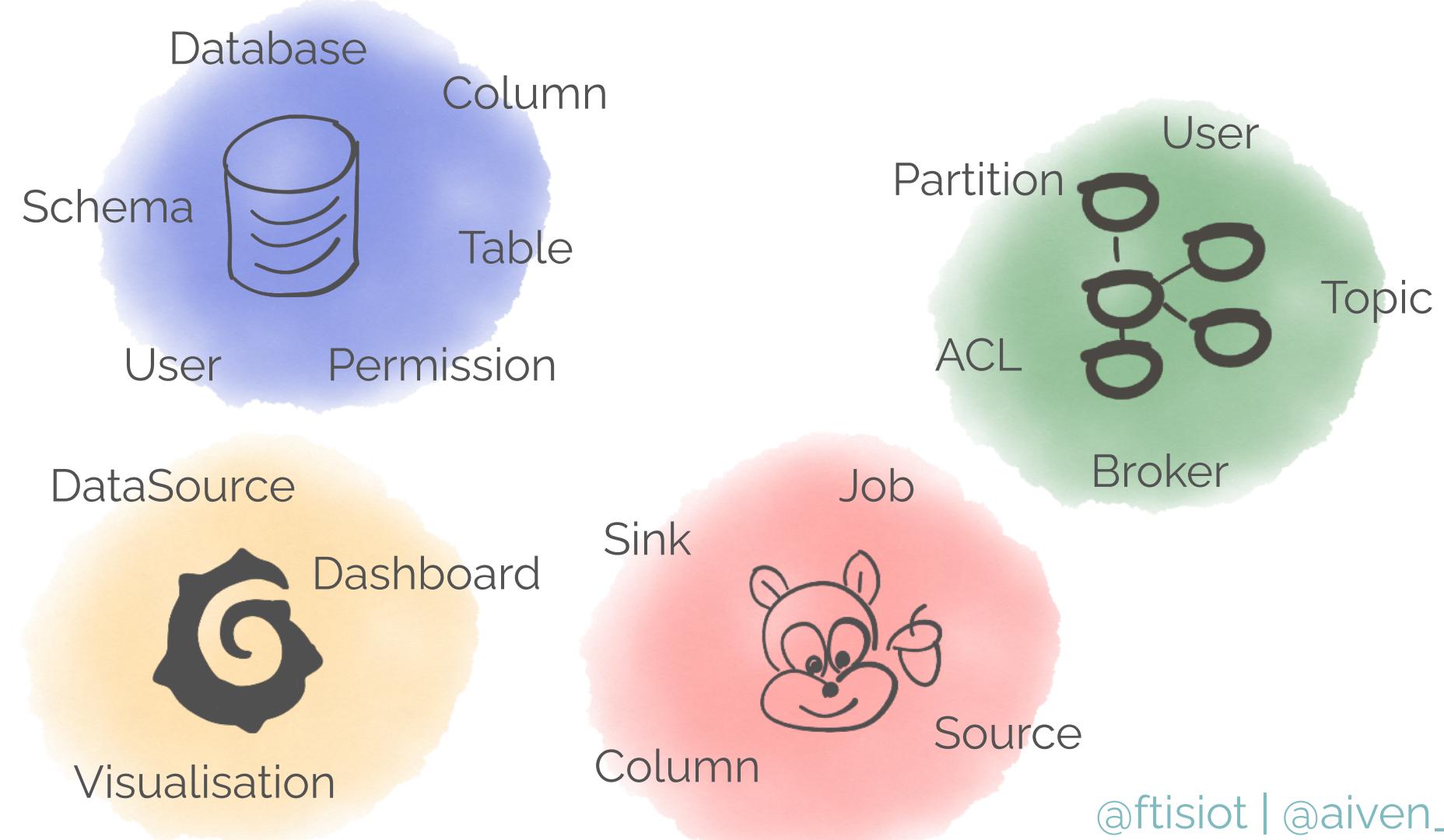


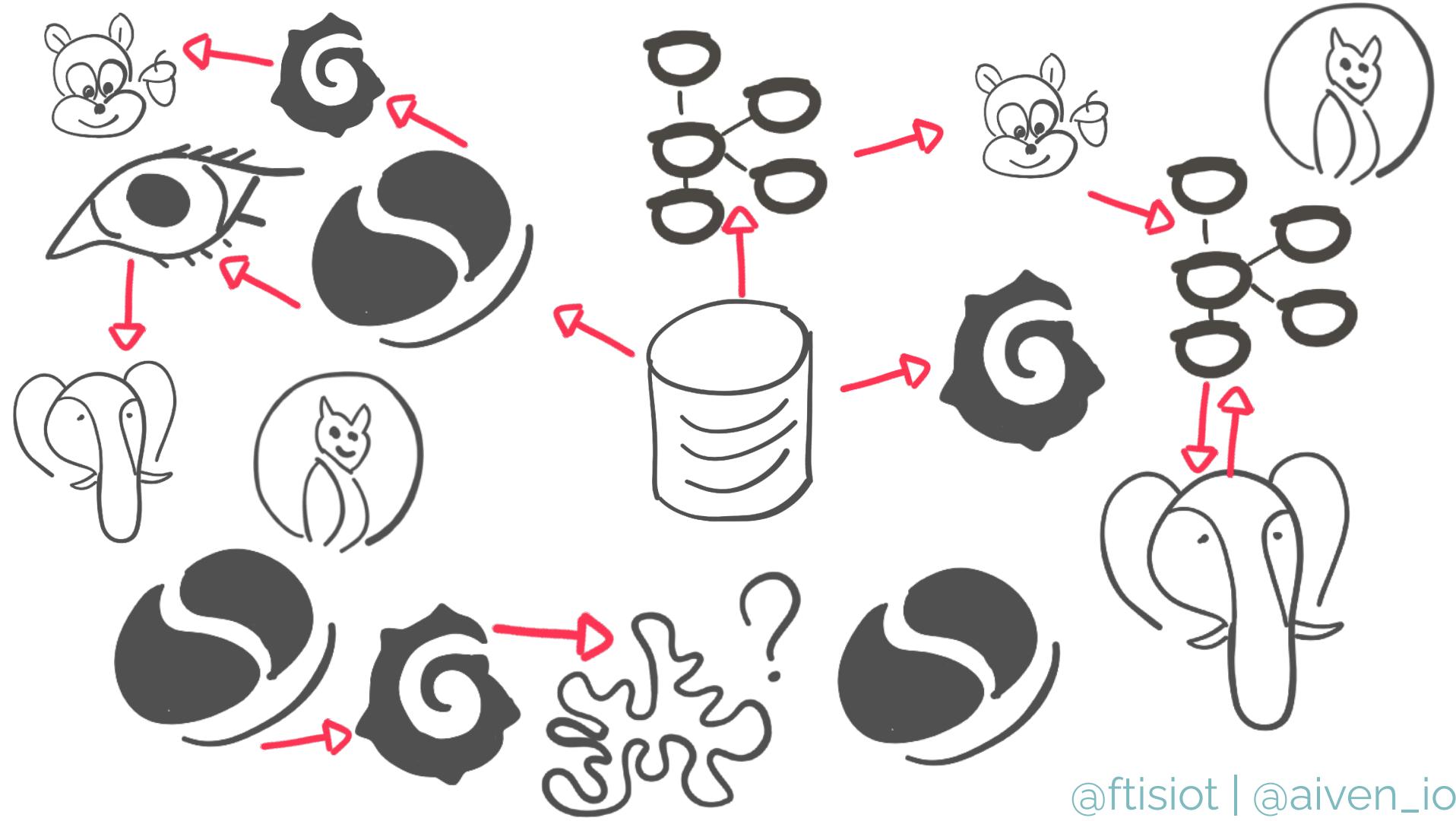
@ftisiot | @aiven\_io

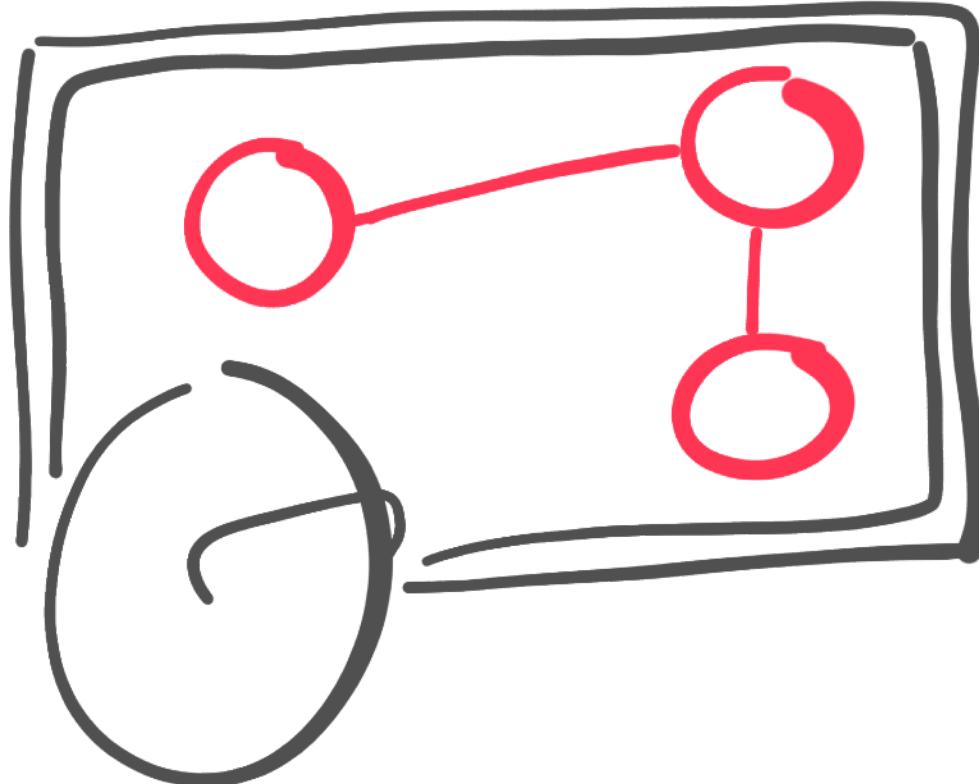
# Open Source



```
[{  
    "cleanup_policy": "delete",  
    "min_insync_replicas": 1,  
    "partitions": 10,  
    "replication": 2,  
    "retention_bytes": -1,  
    "retention_hours": 168,  
    "state": "ACTIVE",  
    "topic_name": "website_clicks"  
}]
```







# Graph Theory



Node



Edge

# Buddy

Specie: Dog

Breed: Mixed

Age: 7

Preferences:

- [food,
- squirrels,
- playing-ball]



FriendOf

Start: 12/05/2015

Strength: very strong

# Carlo

Specie: Human

Job: Customer Centric

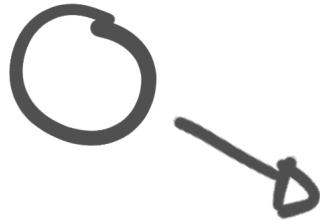
Engineer

Age: 39

Interests:

- [football,
- music,
- tech]

Database: AnimalsDB



Schema: DogSchema



Table: Dogs



Column: Name



Column: Id



Column: Age



User: Vet



Database: AnimalsDB



Schema: DogSchema



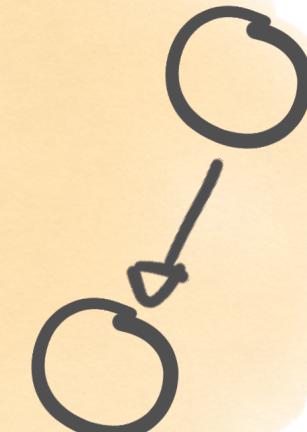
Table: Dogs



Datasource: Dogs\_ds

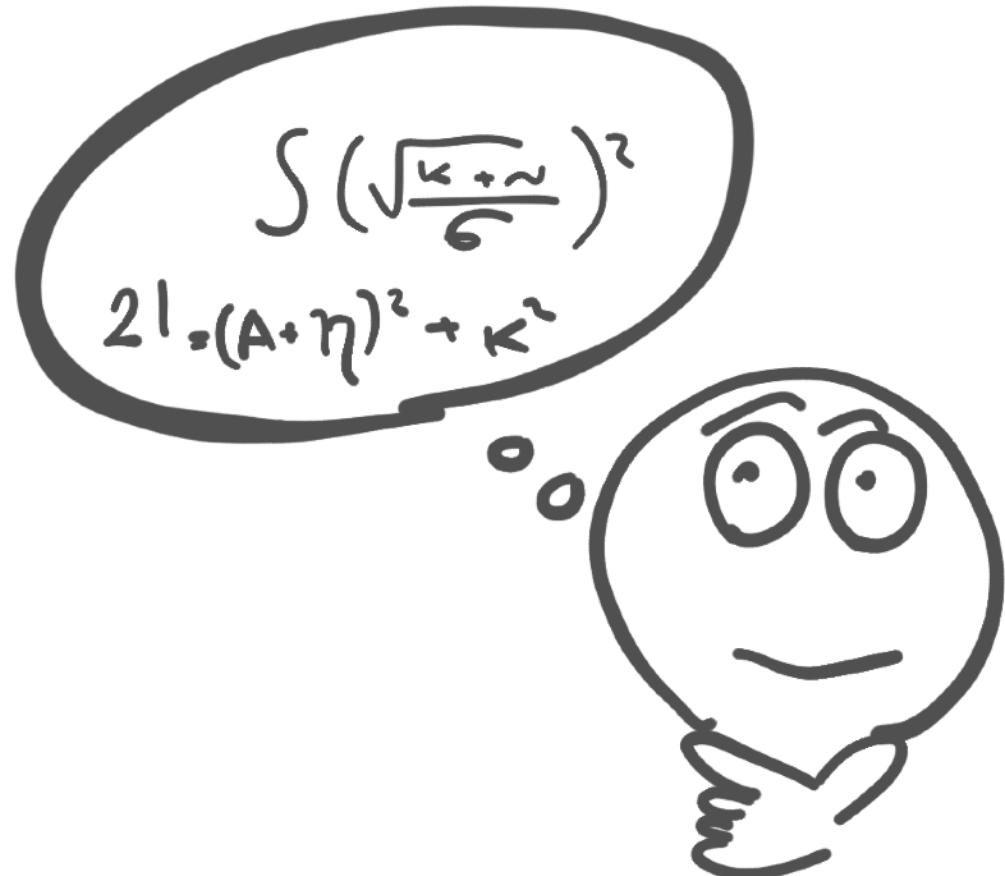


User: Dogs\_usr



Dashboard: Dogs\_dash

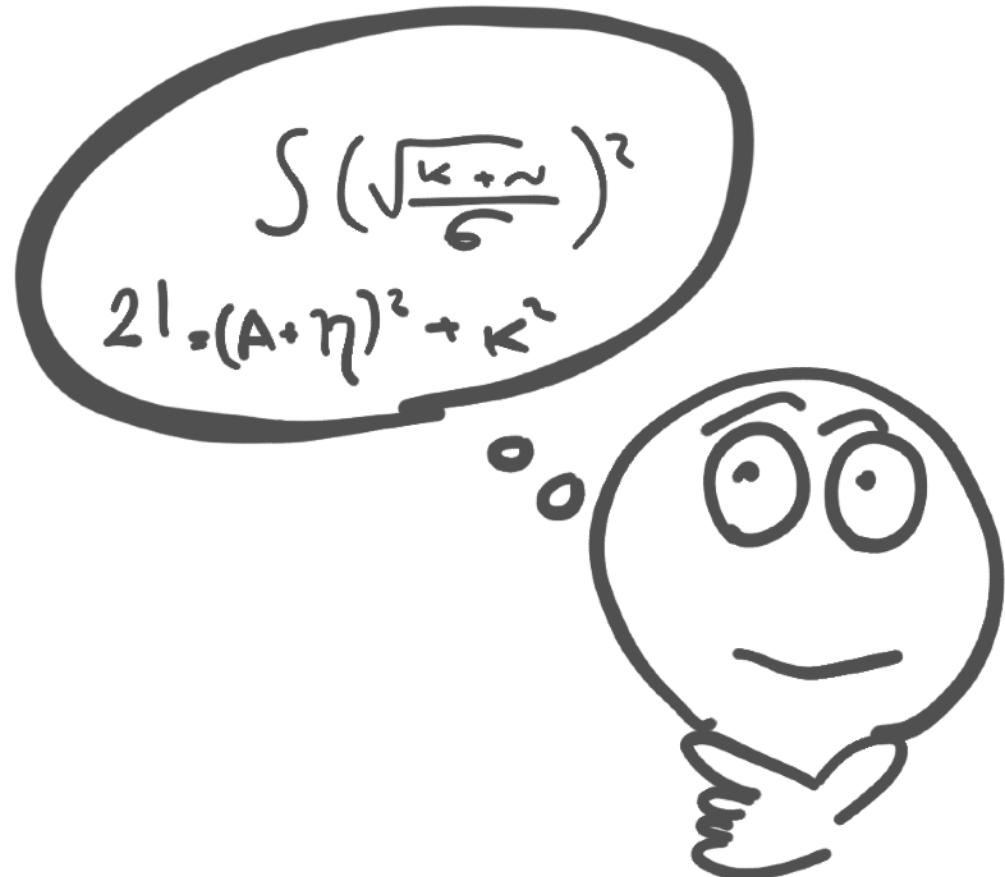
# Get The Data?

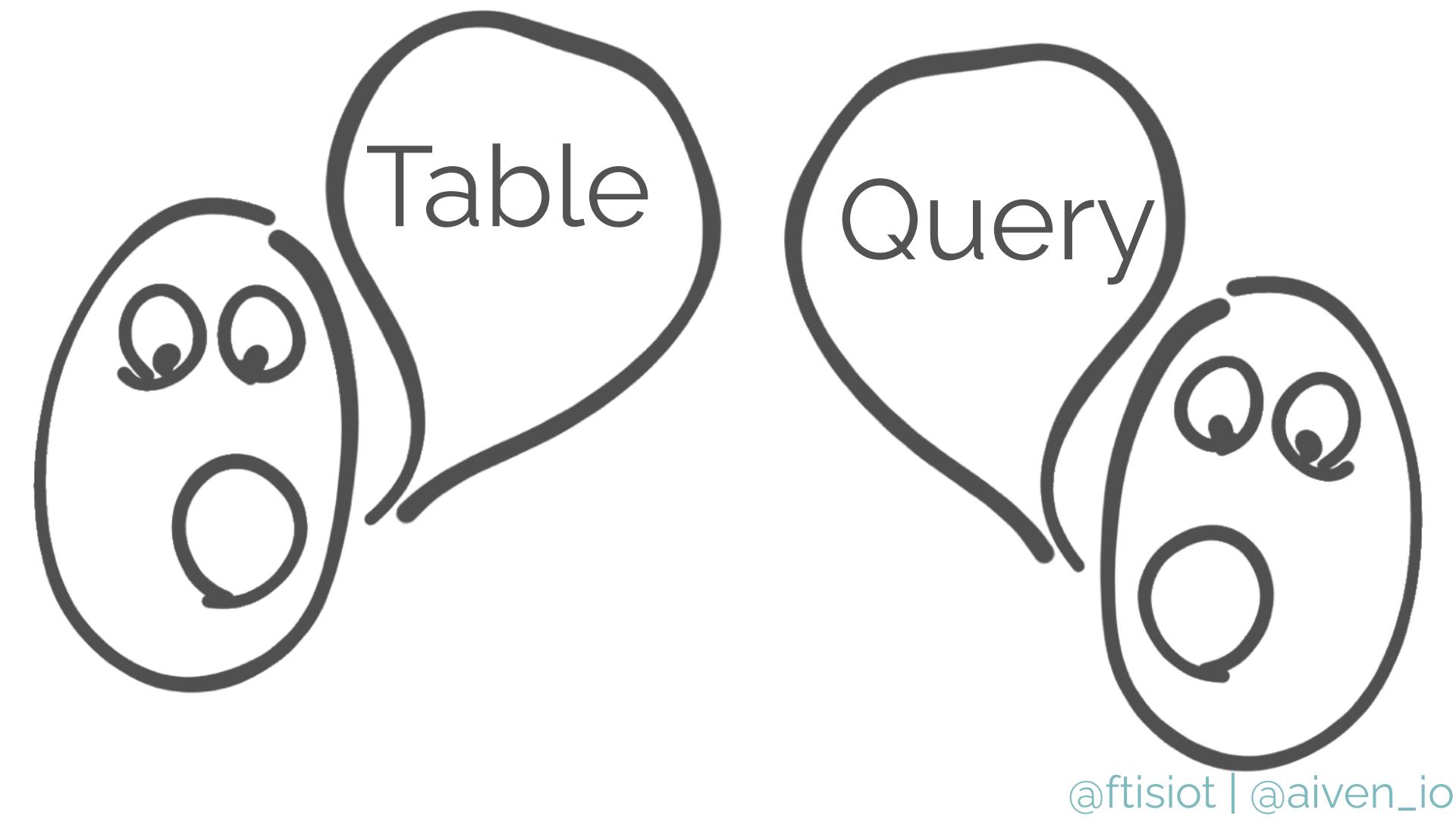


{REST}



# Join The Data?





Table

Query

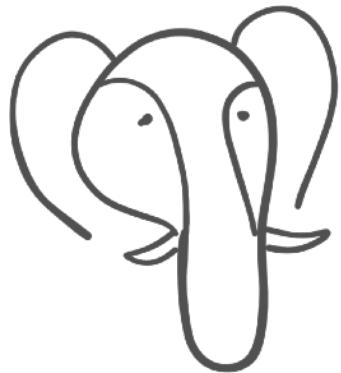


Don't  
despair





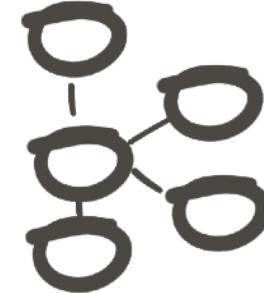
# Aiven's Metadata Parser



PostgreSQL



Apache Flink



Apache Kafka



Grafana



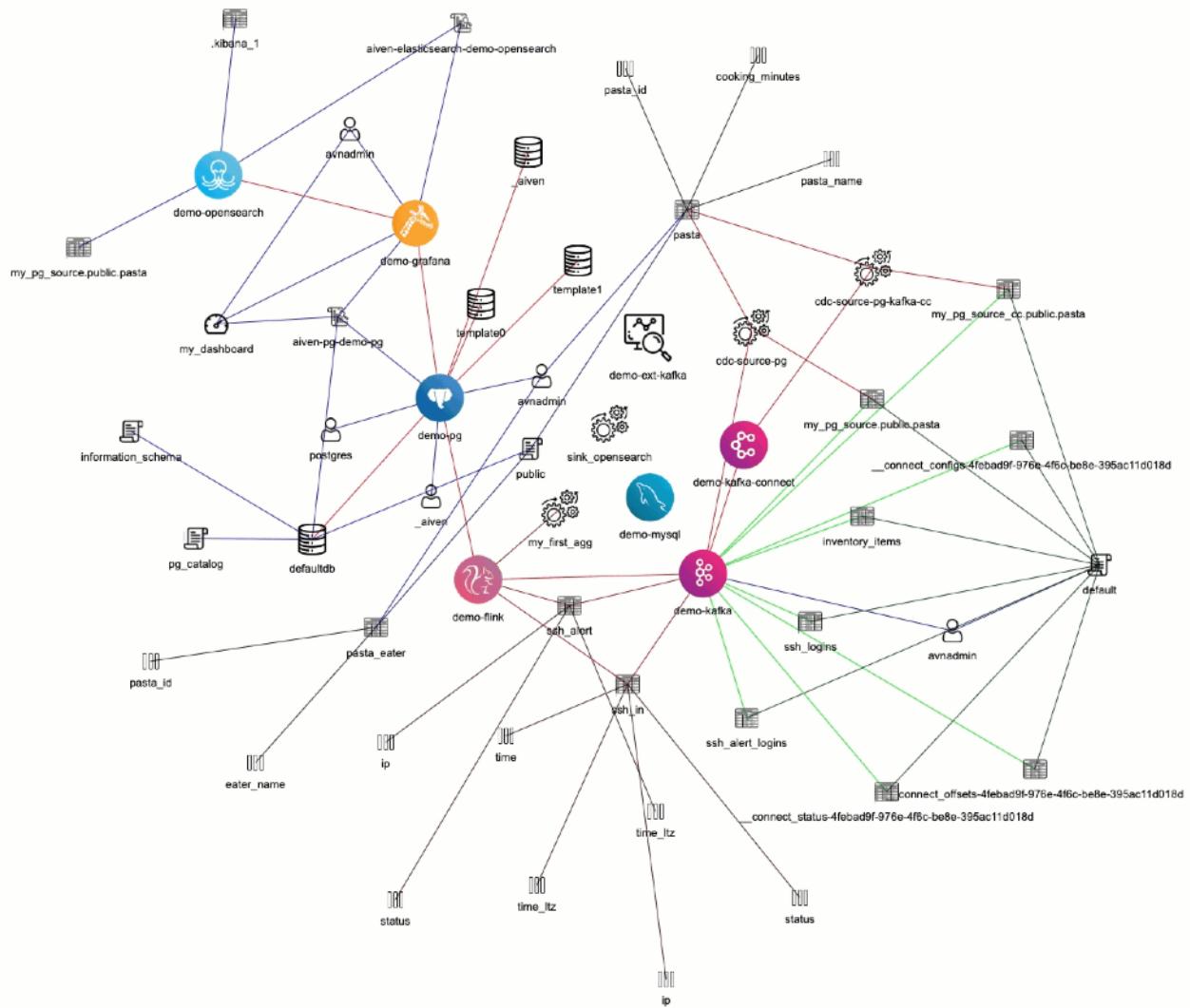
OpenSearch

# .DOT

<https://graphviz.org/doc/info/lang.html>

# .GML

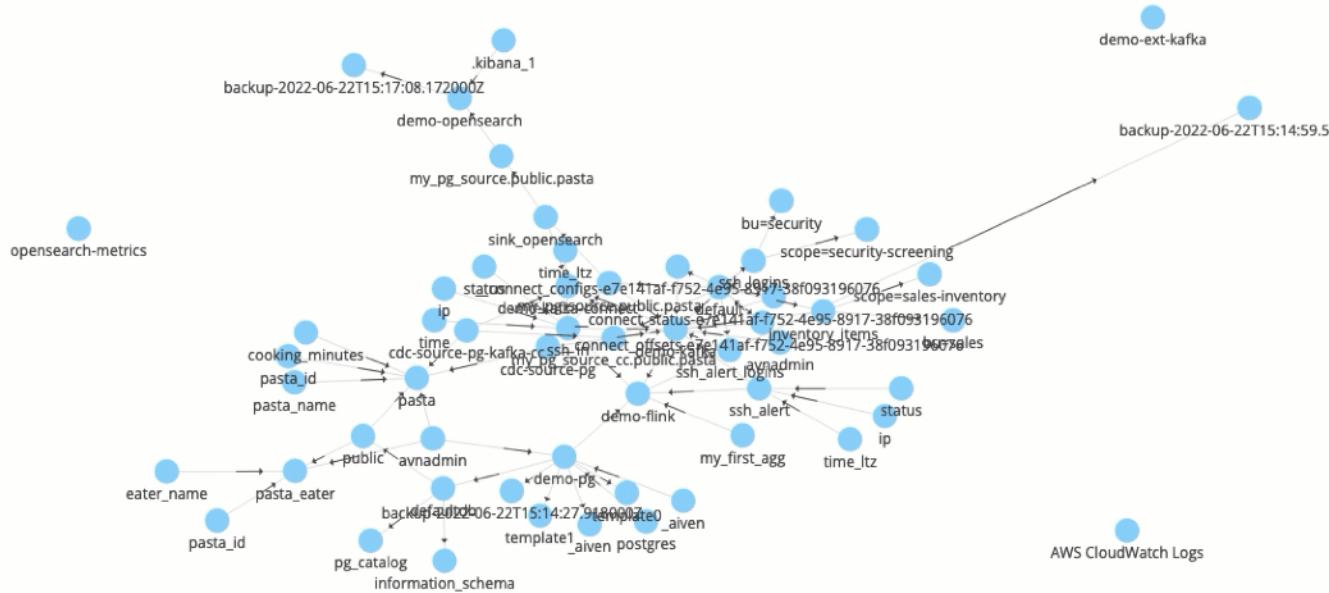
[https://en.wikipedia.org/wiki/Geography\\_Markup\\_Language](https://en.wikipedia.org/wiki/Geography_Markup_Language)



**Node To Search** Input the Node Id to visualize.

Select a node

## Interactive Graph Visualization



### Select Node Types

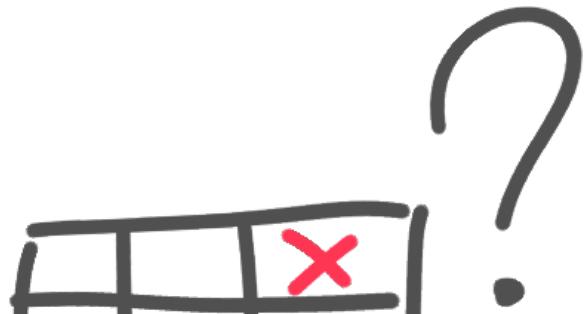
To filter particular services/node types.

- backup
- database
- external\_endpoint
- flink job
- flink table
- flink table column
- index
- kafka-connect
- schema
- service
- table
- table column
- tag
- topic
- topic-acl
- user

### Hover Data

Mouse over values in the graph.

```
{  
  "id": "kafka~demo-kafka~topic~inventory_items",  
  "service_type": "kafka",  
  "type": "topic",  
  "cleanup_policy": "delete",  
  "label": "inventory_items"
```



?

GDPR



Is all your data  
in order?

Yes, now  
shut up



Who can access col A,  
via the 5 tools pipeline?



Is all your data  
in order?



Yes, now  
shut up



Who can access col A,  
via the 5 tools pipeline?



Only Joe,  
now shut up



# Links