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RUBY THALIB AI & DATA CONSULTANT

DATA ENGINEERING

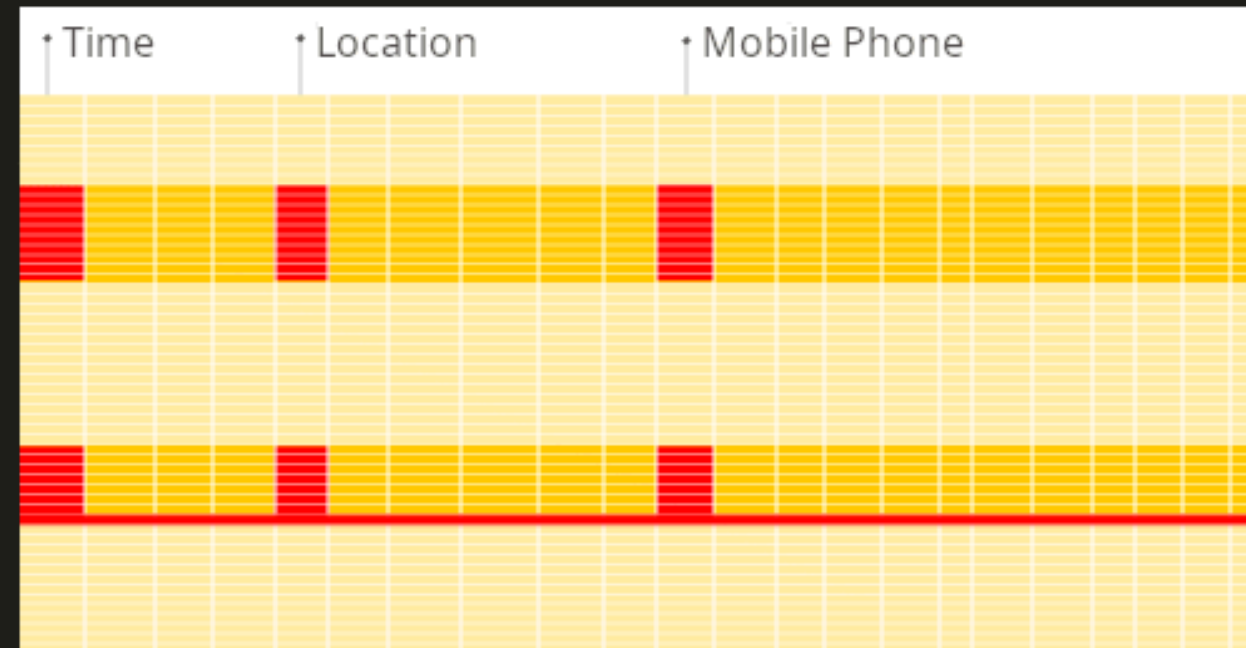
MOST SCOPE

INTERACTIVE CLASS, 2024

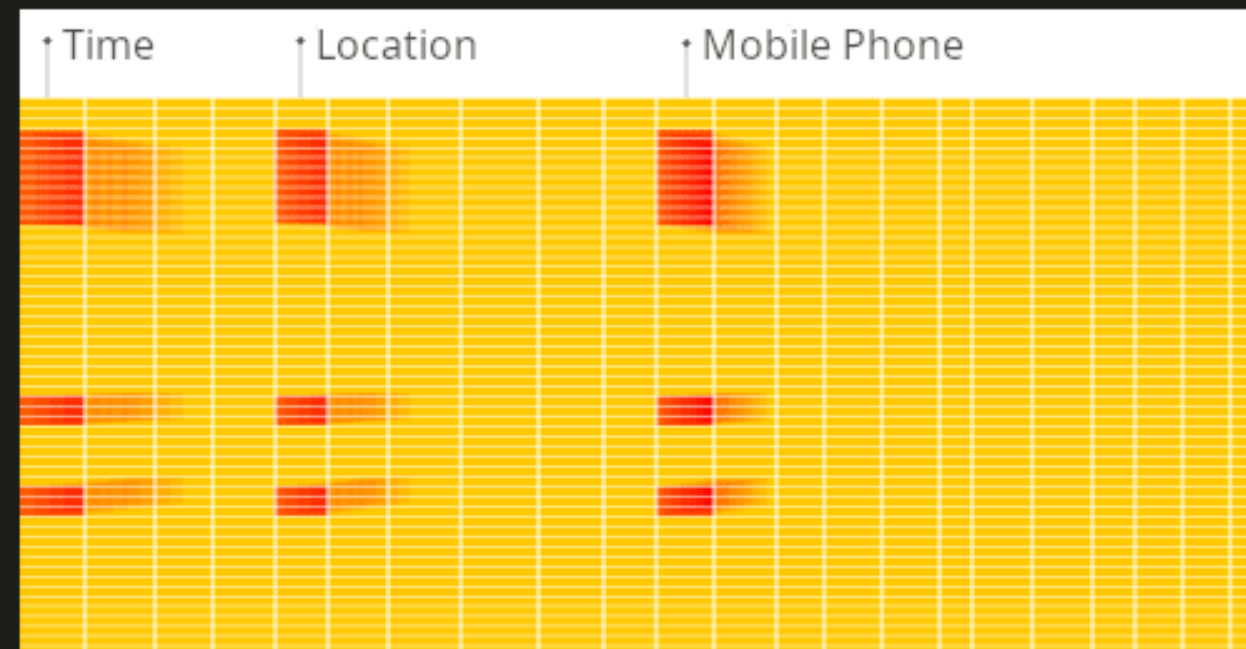
- **Glimpse of CH**
- **Metrics Essentials**
- **Data Visualization Tools**
- **Creating Dashboards**

- Glimpse of ClickHouse

Row-oriented DBMS



Column-oriented DBMS



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- Glimpse of ClickHouse

Row-Oriented

Row	WatchID	JavaEnable	Title	GoodEvent	EventTime
#0	89354350662	1	Investor Relations	1	2016-05-18 05:19:20
#1	90329509958	0	Contact us	1	2016-05-18 08:10:20
#2	89953706054	1	Mission	1	2016-05-18 07:38:00
#N

Column-Oriented

Row:	#0	#1	#2	#N
WatchID:	89354350662	90329509958	89953706054	...
JavaEnable:	1	0	1	...
Title:	Investor Relations	Contact us	Mission	...
GoodEvent:	1	1	1	...
EventTime:	2016-05-18 05:19:20	2016-05-18 08:10:20	2016-05-18 07:38:00	...

• Glimpse of ClickHouse

Engines in the family:

- MergeTree
- ReplacingMergeTree
- SummingMergeTree
- AggregatingMergeTree
- CollapsingMergeTree
- VersionedCollapsingMergeTree
- GraphiteMergeTree

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- **Metrics Essentials**

DEALING WITH ...

FORMAT

- date
- datetime
- timezone
- decimal
- float

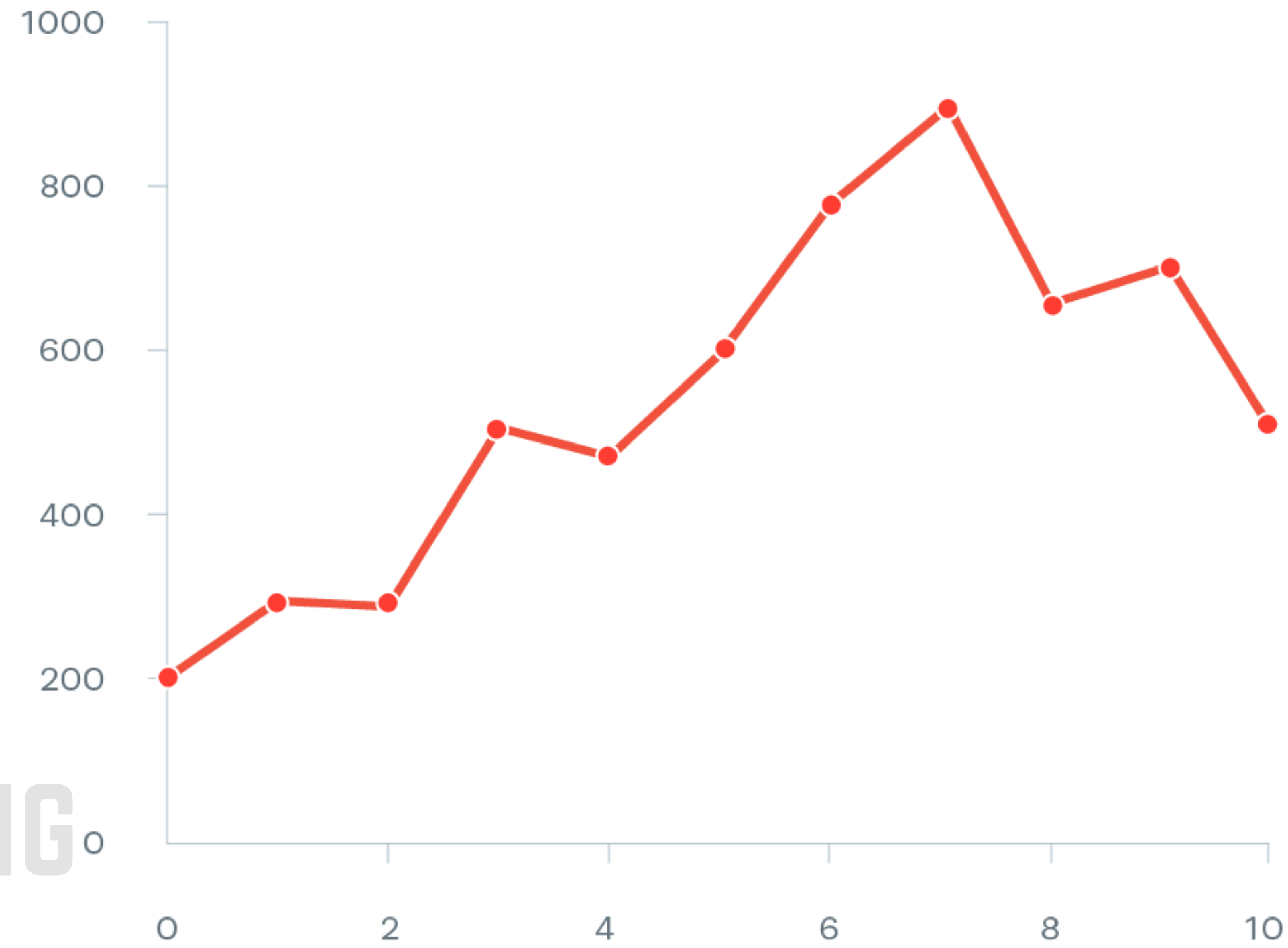
VALUE

- yyyy-mm-dd
- dd-mm-yyyy
- 98,1412414214
- 98,14

REQUEST

- user want a
- user want b
- user want c

- # Metrics Essentials



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- **Data Visualization Tools**

matplotlib

YOU CAN START WITH



 *seaborn*

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- **Data Visualization Tools**



Streamlit



Grafana

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Power BI

**OR DEV NATIVE
DASHBOARD**

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DATA ENGINEERING

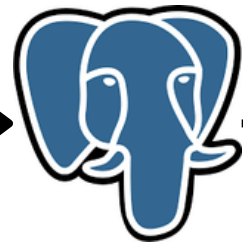
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DAY 7 TRIAL :D

source layer

PySpark



storage layer

kafka



Streamlit



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