

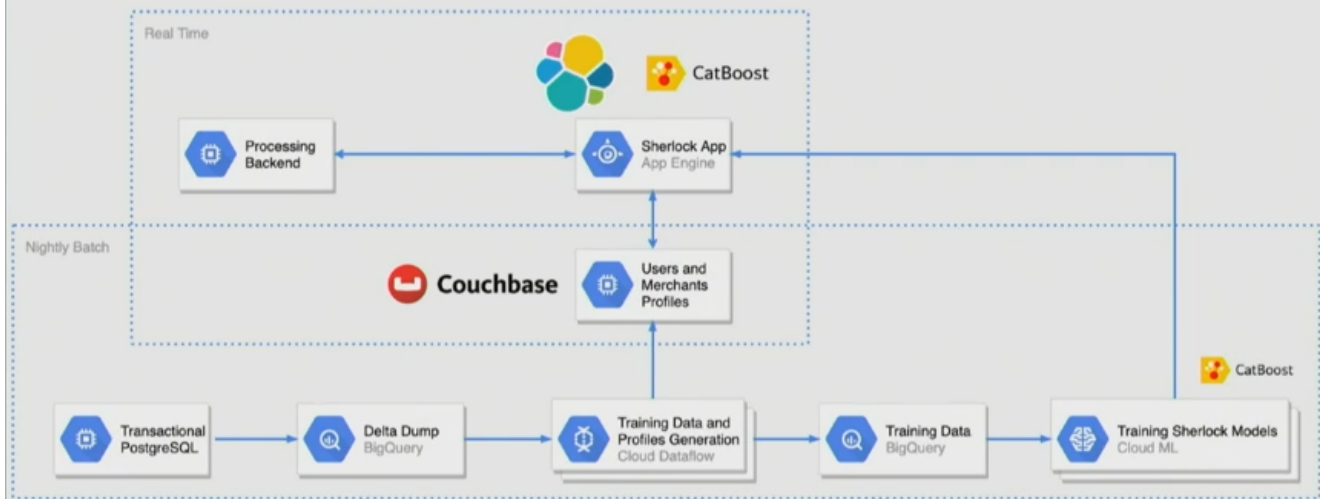
	Merchant	Amount	Date	Country	Currency	Method
OK	Taxi Co	2,000,000	20.02.2019	IND	INR	Magstripe
OK	Airport Cafe	20	23.02.2019	GBR	GBP	Chip&Pin
OK	Best Doughnuts Co	12	25.02.2019	GBR	GBP	Contactless
Fraud	Best Jewellery Co	2,000	27.02.2019	GBR	GBP	E-Commerce
Fraud	Cash at ATM	5,000,000	27.02.2019	IND	INR	Magstripe
Fraud	Cash at ATM	10,000,000	27.02.2019	IND	INR	Magstripe
Fraud	Cash at ATM	20,000,000	27.02.2019	IND	INR	Magstripe
Fraud	Online Movies Co	20	27.02.2019	GBR	GBP	E-Commerce
Fraud	Food Delivery Co	40	27.02.2019	GBR	GBP	E-Commerce

1. Merchant
2. Amount
3. Date of transaction
4. Country where transaction happened
5. Currency (INR or GBP)
6. Method of transaction (Magstripe, Chip&Pen, Contactless, E-Commerce)
7. Velocity of transaction
8. User focused features (based on behavior)
9. Merchant focused (how much an x transaction with Merchant y is different than average population transaction with Merchant y )

# Sherlock Architecture



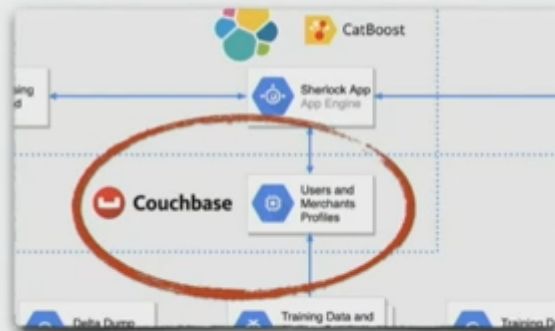
Google Cloud Platform



# Why Couchbase?

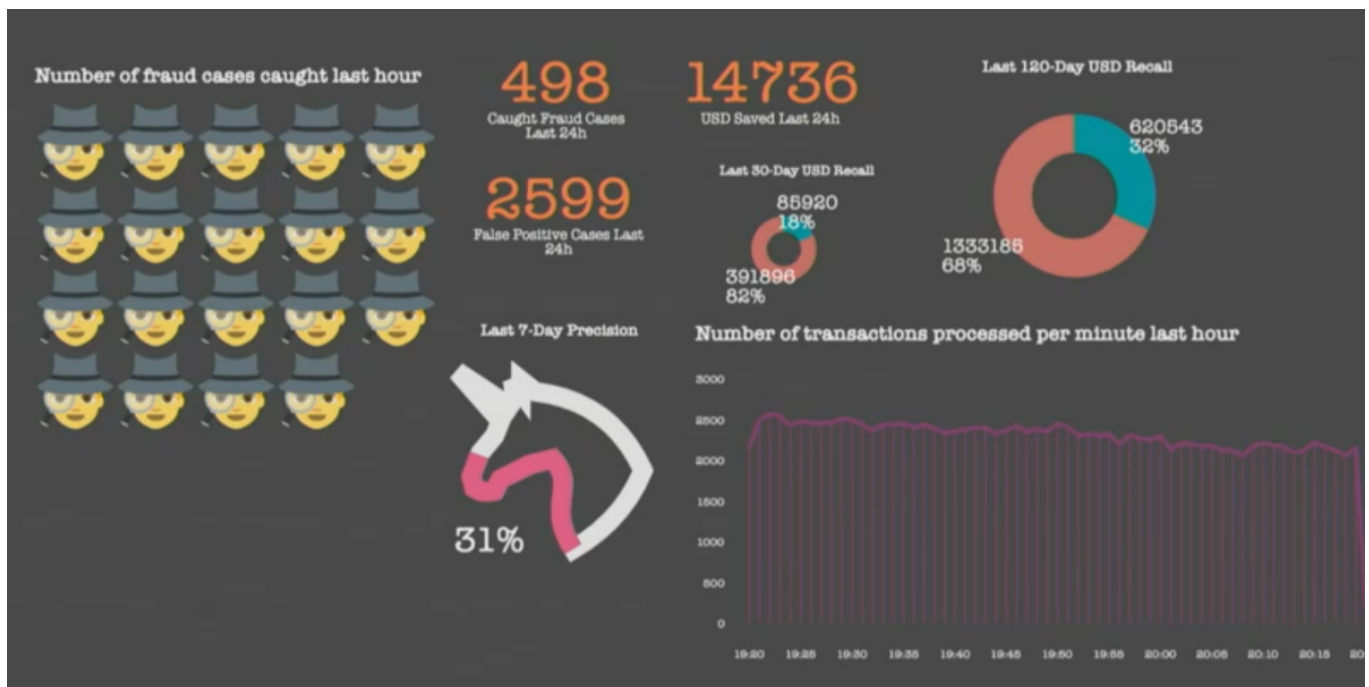
## Requirements for Profiles Storage

- JSON Documents
- SQL Support
- Key-Value
- ms-Latency
- High Throughput
- High Availability
- Easy Maintenance



## Couchbase Enterprise at Revolut

- Google Cloud Marketplace Deployment
- 10 Nodes: 8 Data, 1 Query, 1 Index
- 40M documents, 3 replicas each
- 300 ops/sec, up to 8K ops/sec
- 3ms 99th percentile, 1ms 90th percentile
- Maintained by 1 person :)



## Takeaways

- Data Quality
- Start Early
- Embrace the Cloud
- Experiment!

Ref: How to build a fully autonomous credit card fraud detection system (Revolut), Big Data London, 2019