#### A unique opportunity for you to be mentored by Amazonians



Week 6 22-Oct-2022





#### **Agenda**

#### Technical Track (40 Mins)

- AWS Glue
  - > Ashish Prajapati

#### Serverless Track (30 Mins)

- Observability
  - > James

#### Behavioural Track (15 Mins)

- Guest Speaker
  - > Jamila

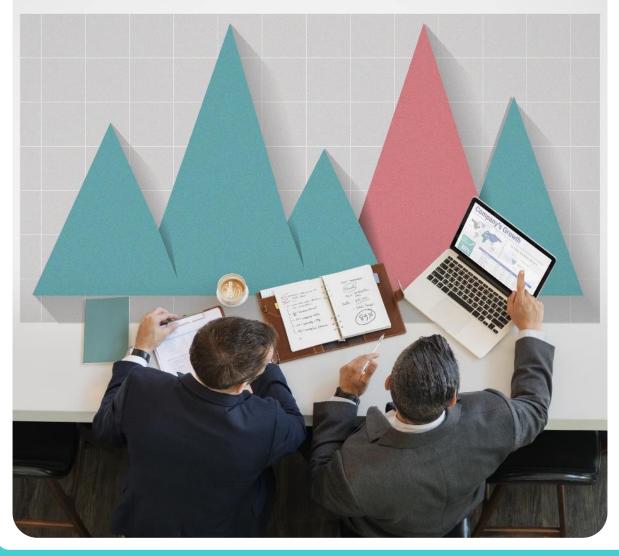


"Without data,
you are just another
person with an opinion."

https://datafloq.com/read/repair-your-data-weakness-see-your-profits-rise/6737

~ W. Edwards Deming





"If we have data,

let's look at data.

If all we have are opinions,

let's go with mine."

~ Jim Barksdale

https://www.everythingsupplychain.com/analytics-big-data-quotes/



3M Messages sent

140,000 Calls

1.2M Users login

2000 New users join

300,000 Stickers sent

10,000 Group chat likes

1.5M Photos sent

FINCA

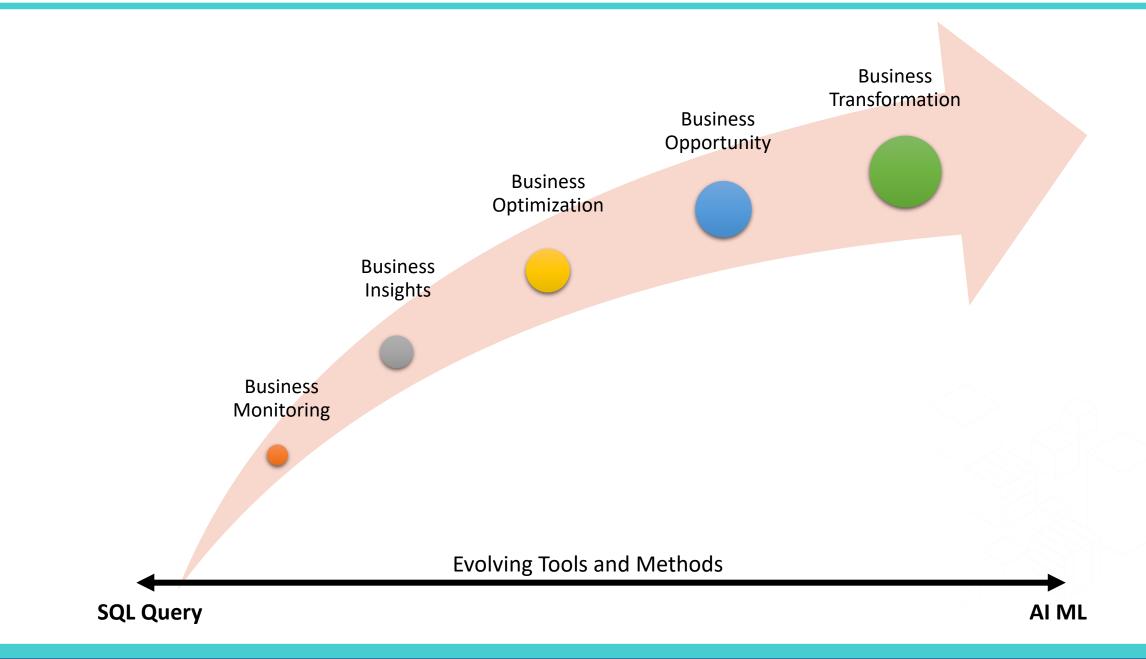
75 billion market events

50,000 Files daily

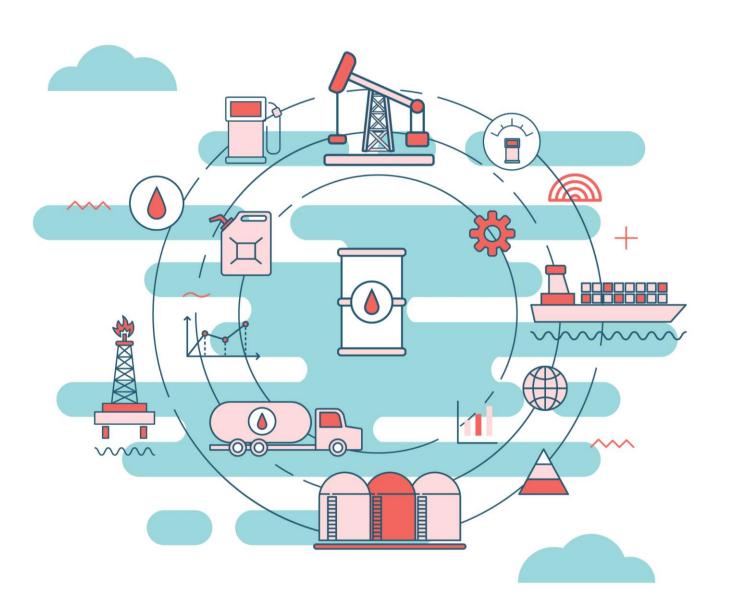
200 Rules to format files

Half a trillion validations each day

#### Finding Value in Data is a Journey



#### Data is new oil



#### **OIL & GAS INDUSTRY**

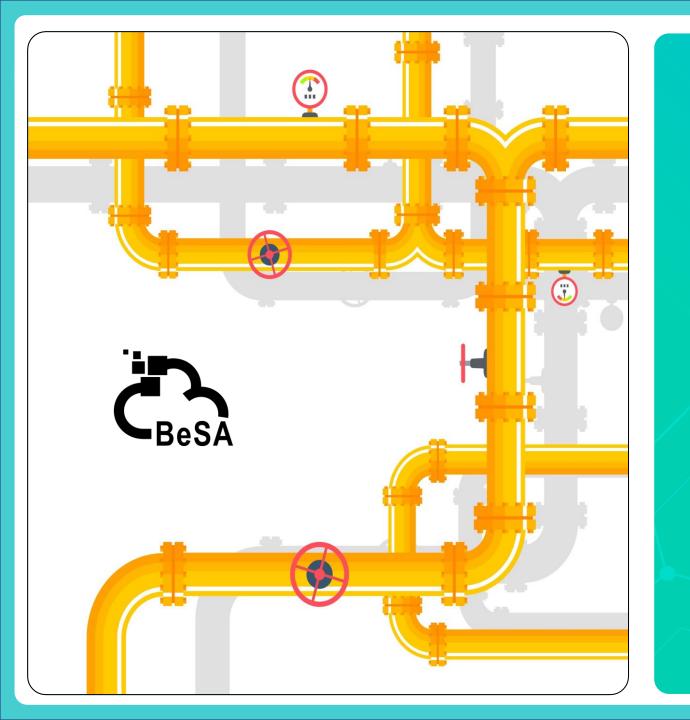
1 Mining

- **2** Filtering and Processing
- 3 Distribution

4 Consumption

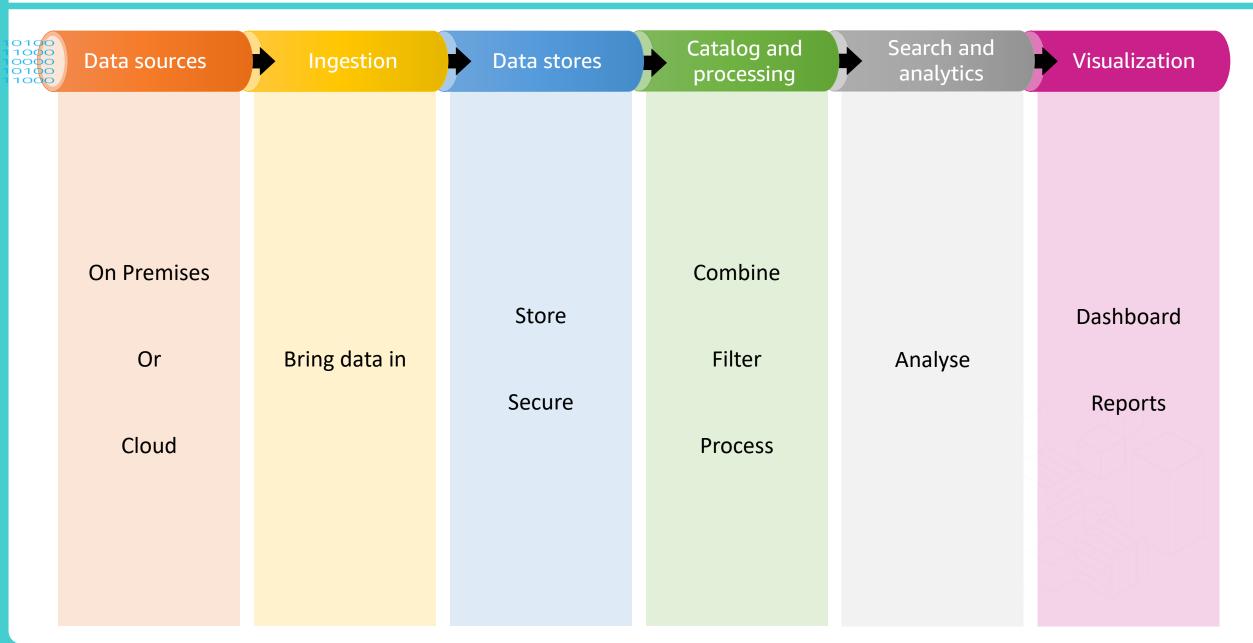
#### Oil Pipeline



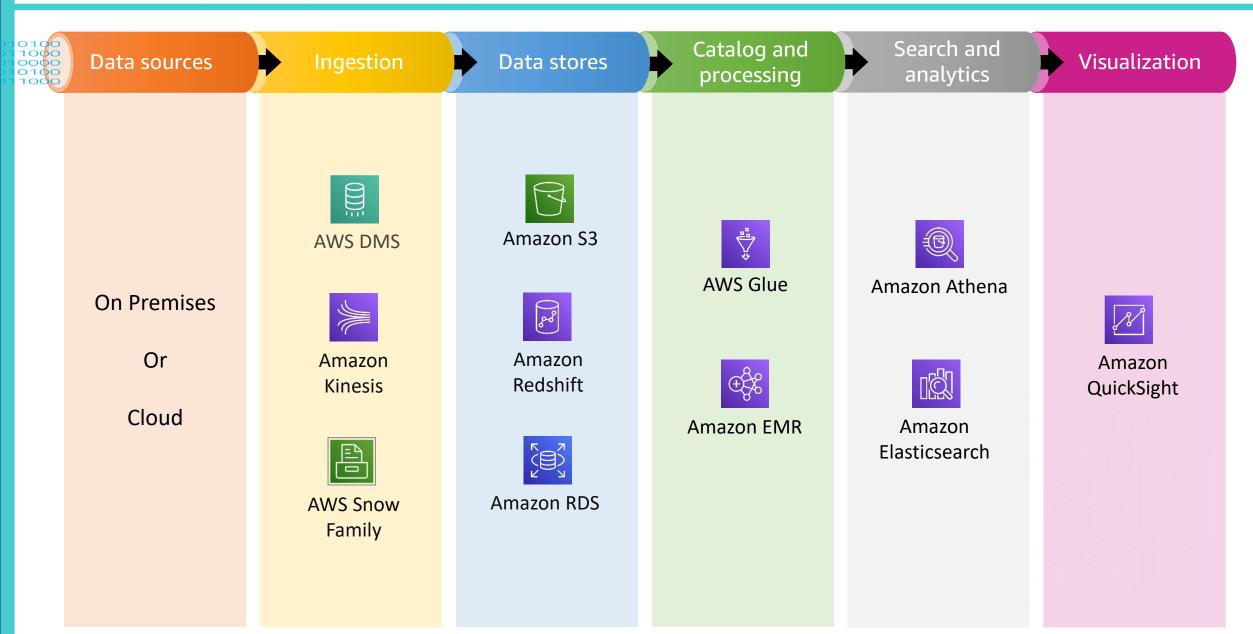


**Data Pipeline** 

#### Data Analytics Pipeline



#### Data Analytics Pipeline using AWS Services







**AWS Glue** 

### AWS Glue is fully managed extract, transform, and load (ETL) service that makes it easy to prepare and load your data for analytics



**AWS Glue Data Catalog** stores metadata from variety of data sources, maintains key information about data such as partitions, schema changes



AWS Glue Crawlers connects to data stores, progresses through a prioritized list of classifiers to determine the schema for the data, and then creates metadata in your AWS Glue Data Catalog.



Serverless Spark - fully managed cost efficient ETL engine for Big Data processing with 1 minute billing and super fast startup times

Dynamic Frames extends Spark to handle dynamically changing structures

AWS Glue Streaming processes real time data streams from IoT devices



ML powered data cleansing enables data engineers handle complex data quality problems such as matching inconsistent patient names, customer names



**AWS Glue Studio** allows authoring of highly scalable ETL jobs for distributed processing without becoming an Apache Spark expert



**AWS Glue Development Endpoints** provides notebook styled interactive ETL development so that developers can easily develop ETL code step by step



Glue Workflows orchestrates Glue jobs based on schedule, on demand or an event allowing customers to build complex ETL pipelines

#### **AWS Glue Data Catalogs and AWS Glue Crawlers**

Catalog

AWS

Glue



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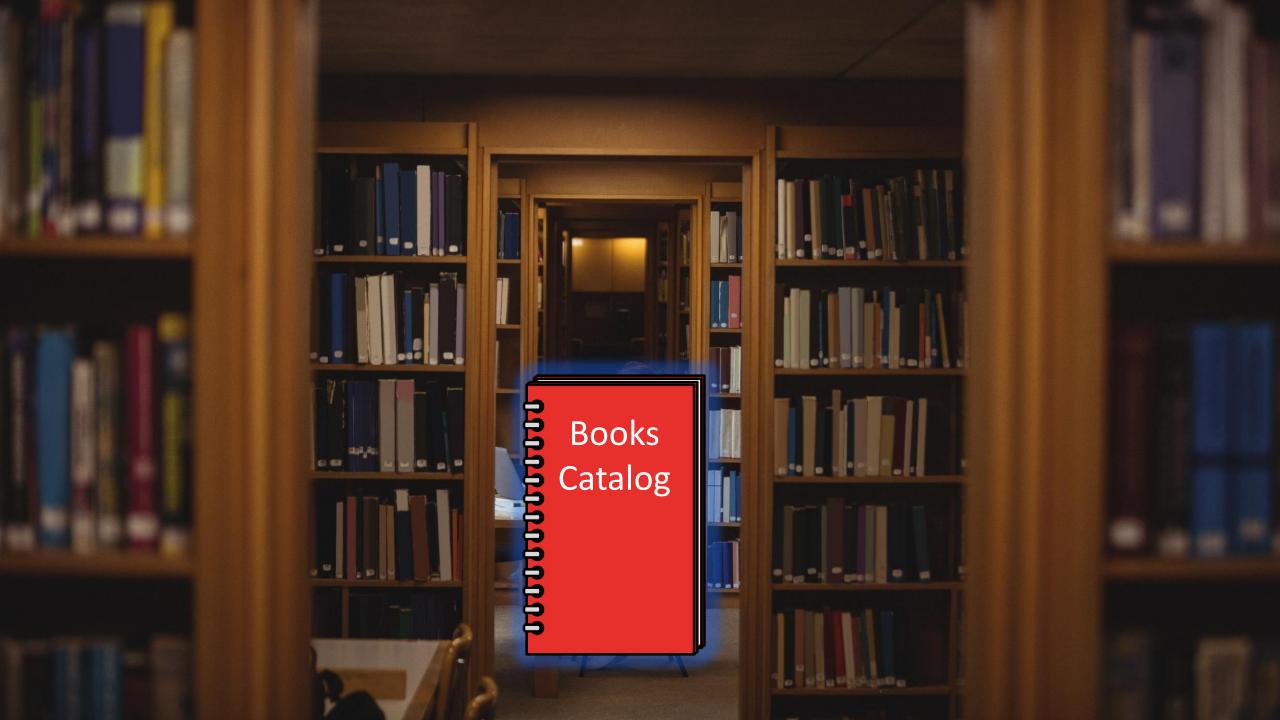


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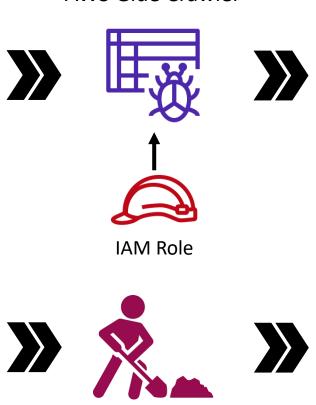
#### **AWS Glue Data Catalog**

Create tables using AWS Glue Crawler

# S3 JSON, CSV, or Parquet files stored in S3. JDBC JDBC stream as the data source DynamoDB DynamoDB as the data source DocumentDB/MongoDB Mongo DB as the data source Delta Lake

(On-Prem / Cloud)

Delta Lake as the data source

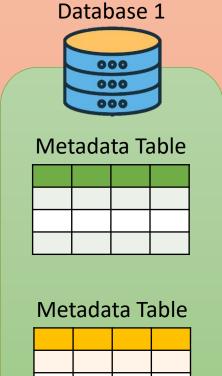


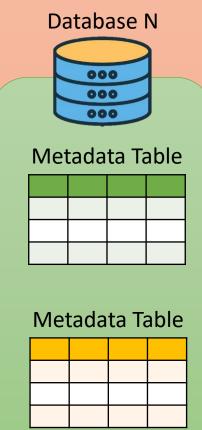
Create tables manually

## Glue Data Catalog

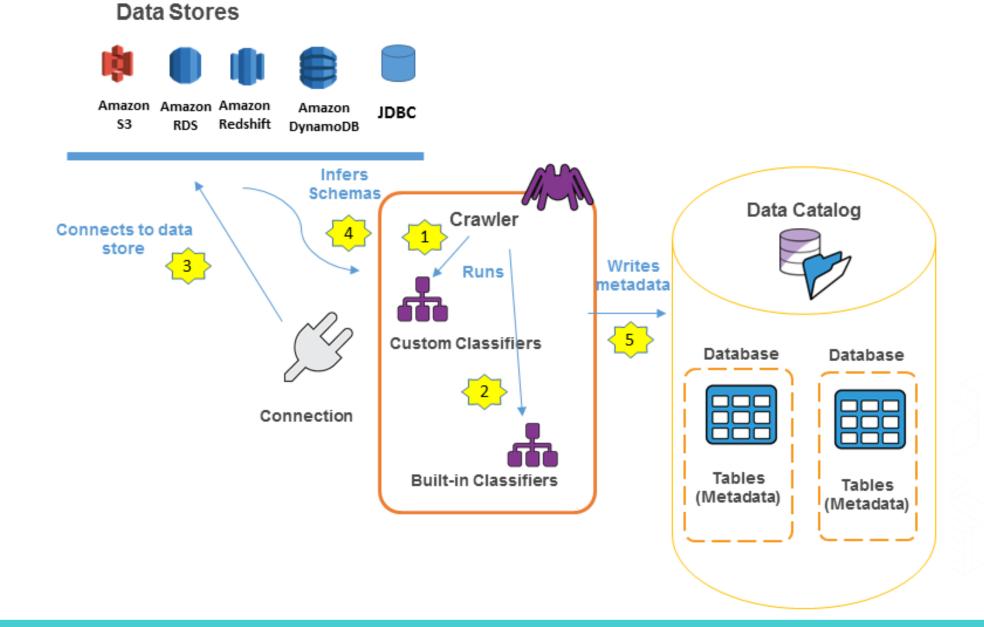
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#### Populating the AWS Glue Data Catalog





Serverless Track

- James Eastham



**Guest Speaker** 

Cristian

- Jamila Jamilova



Thank you.

See you next week.