

Day - 1

- **ClickHouse Architecture**
 - Columnar storage
 - MergeTree engines
- **Installing ClickHouse (Standalone, Docker, Cloud options)**
- **Creating Tables**
 - MergeTree
 - Replacing
 - Summing
 - Aggregating engines
- **Inserting & Querying Data**
 - Basics and syntax
- **Hands-On Lab**
 - Install ClickHouse and load sample datasets

Day - 2

- **Query Optimization Techniques**
 - Projections, Indices, JOINS
 - Materialized Views and Live Views
- **Working with JSON, CSV, Parquet, and Kafka Connectors**
- **Monitoring & Metrics**
 - System Tables
 - Queries
 - Performance stats
- **Distributed ClickHouse Setup**
 - Shards
 - Replicas
 - ZooKeeper basics
- **Hands-On Lab**
 - Real-time analytics pipeline (Kafka → ClickHouse)
- **Wrap-up**
 - Q&A, and Use Case Discussion