About me

- With BigBasket since 2016.

- Platform/Site-Reliability-Engineering Team.

- A constant learner.

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Real-time Usecases

- Querying Geo-JOSM data in Real-time.

- Real-time User Behaviour Analytics.

- Real-time View of flow of Data.

- Switching Database connections in Real-time.

- And some (Near) Real-time usecases.

Querying Geo-JOSM data in Real-time

- Given a polygon, how many orders are happening over a period of time ?

- Useful for deciding if hubs are running at optimal capacity.

- Query Aerospike (persistent-cache) containing 70 Lakh addresses and get response in a few seconds.

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Real-time User Behaviour Analytics

- Know user's behavior in real-time.
  - Useful for segmentation of Users.
  - Useful for suggesting Promos in real-time.
- Client side and server side tracking.
- Using Snowplow, (AWS) Kinesis, Stream-Enrich combo, enriched and processed events data is pushed to (AWS)Redshift for all analytics and business needs.

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Real-time View of flow of Data

- Debezium (built on Kafka)

- Turns your existing databases into event streams

- Applications can now see and respond immediately to each row-level change in the databases.

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Switching Database Connections in Real-time.

- Mission: Always serve fresh data for the consumer.
  - Latest view of (delivery)slots.
  - Latest order status.
  - Latest view of product sales.
- But databases, especially Replicas, are bound to have lag problems.
- A heavy query on Master, or a heavy query on Replica could be the cause of the problem usually.

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(Near) Real-time Usecases

- Compiling the aggregated data of all products as and when changes happen to products.

- High Buying days:

  - Autoscaling of K8s Pods based on requests count for a given (micro)service.

  - Autoscaling of (AWS)EC2 instances based on App Response time.

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