COMP 6231 Distributed Systems Design

BIGQUERY

CONTRIBUTORS:

- DHANANJAY NARAYAN (40164521)
- ISHIKA DHALL (40164795)
- SARVESH RAYTER (40162295)
- SHUBHAM VASHISTH (40164794)

WE WILL BE DISCUSSING

PROBLEM STATEMENT

BIGQUERY

DISTRIBUTED DESIGN OF BIGQUERY

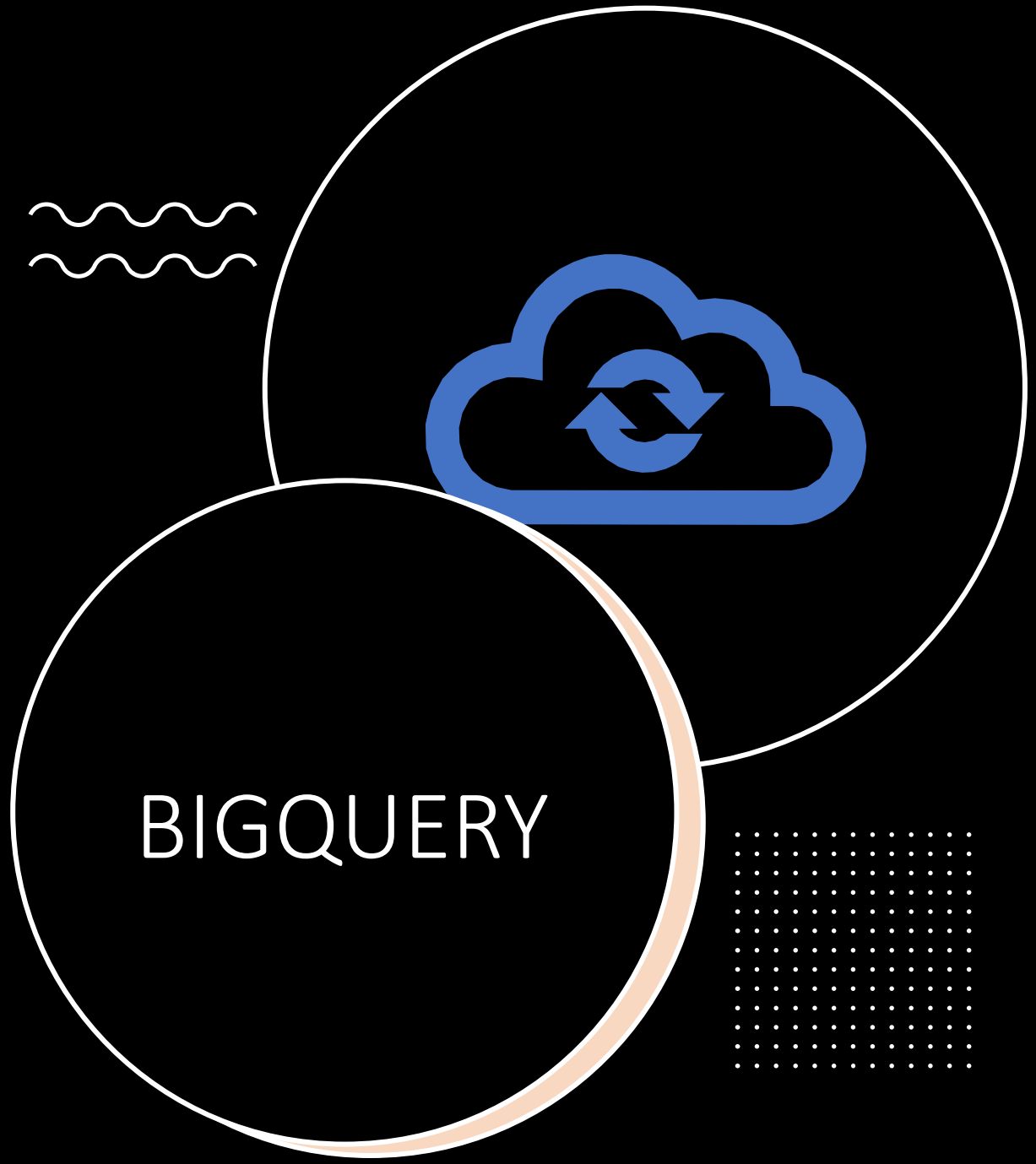
DEMONSTRATION

FINDINGS

Q/A

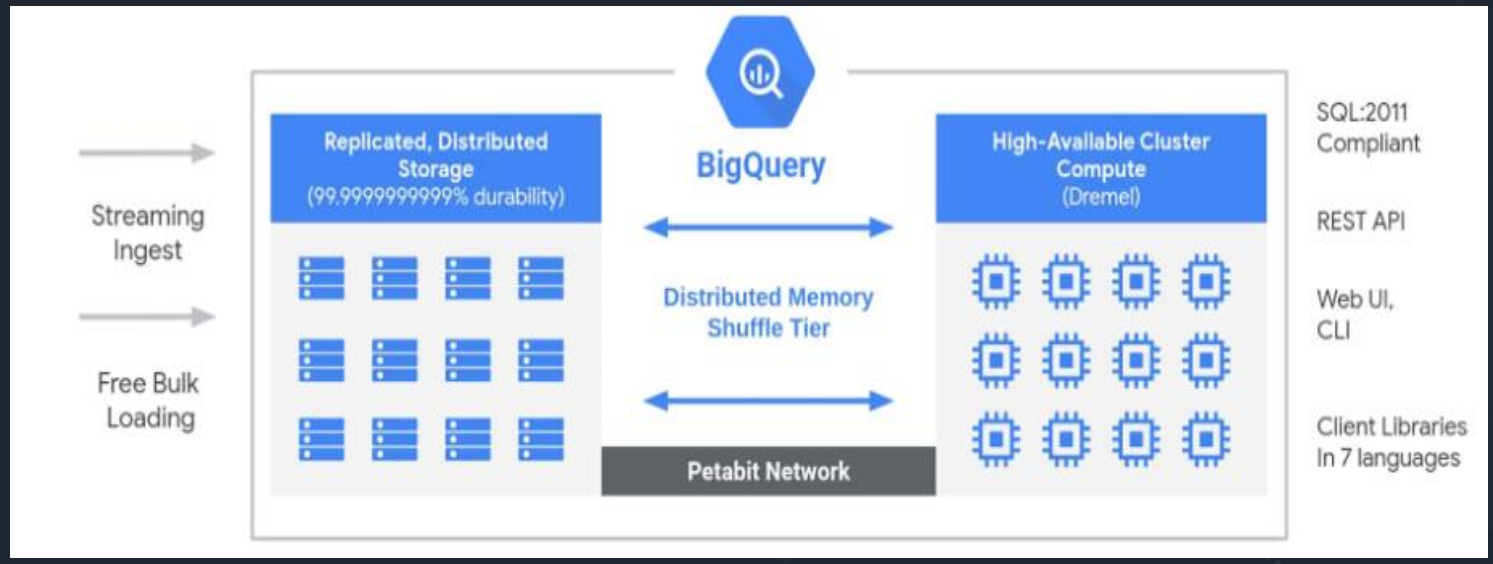
PROBLEM STATEMENT

EPIDEMIOLOGY OF COVID-19 USING GOOGLE BIGQUERY



- An enterprise data warehouse
- Part of Google Cloud Platform
- REST-based web service
- Fully-managed
- Serverless
- Scalable analysis over petabytes of data
- Platform as a Service
- Supports querying using ANSI SQL

DISTRIBUTED ASPECTS



- **Decoupling serverless architecture**
- **Compute: Borg**
- **Query execution: Dremel**
- **Distributed File system: Colossus**
- **Naming: Key-value pairs**
- **Dremel to third-party buyers : REST API**
- **Fault Tolerance**
- **Security**


DEMONSTRATION

FINDINGS

PROS

- **Allows you to run complex analytical SQL-based queries under large sets of data**
- **Faster Query execution**

CONS

- **Pay-per-use but still expensive premium Google Cloud Storage**


ANY QUESTIONS?