

DATASTACK

DEVELOPERS



CASSANDRA SUMMIT
MARCH 13-14, 2023 • SAN JOSE, CA

TRAINING DAY



CASSANDRA SUMMIT
MARCH 13-14, 2023 • SAN JOSE, CA

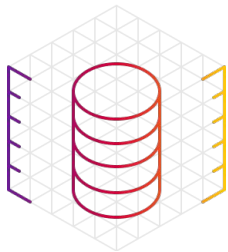
APACHE CASSANDRA® FOR ARCHITECTS AND DATA ENGINEERS:

1 - Solution Architecture

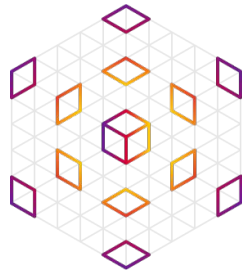


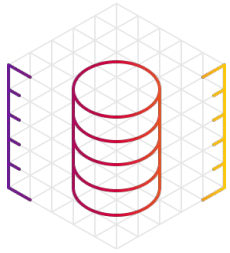
#1

Functional Architecture

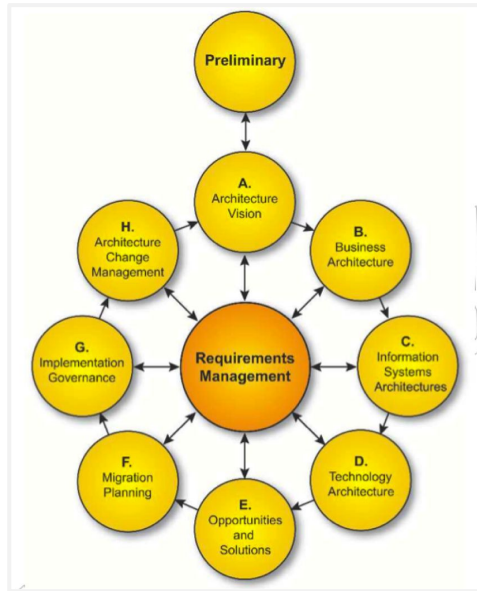
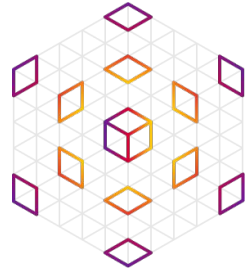


➤ DEMO

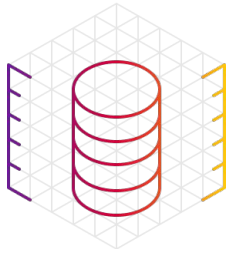




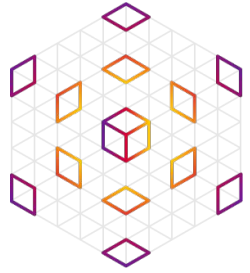
› Architecture “Vision”



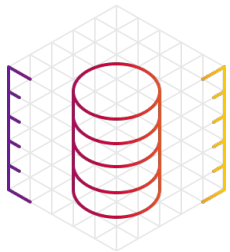
DEMO OF WHAT WE TRY TO ACHIEVE



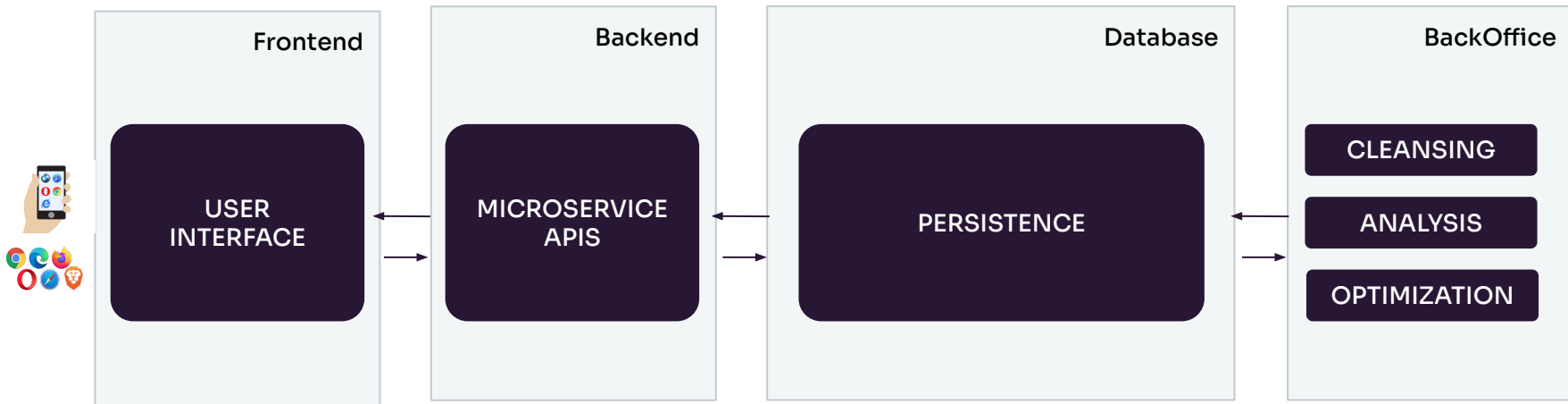
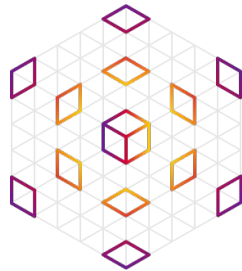
➤ Business Architecture

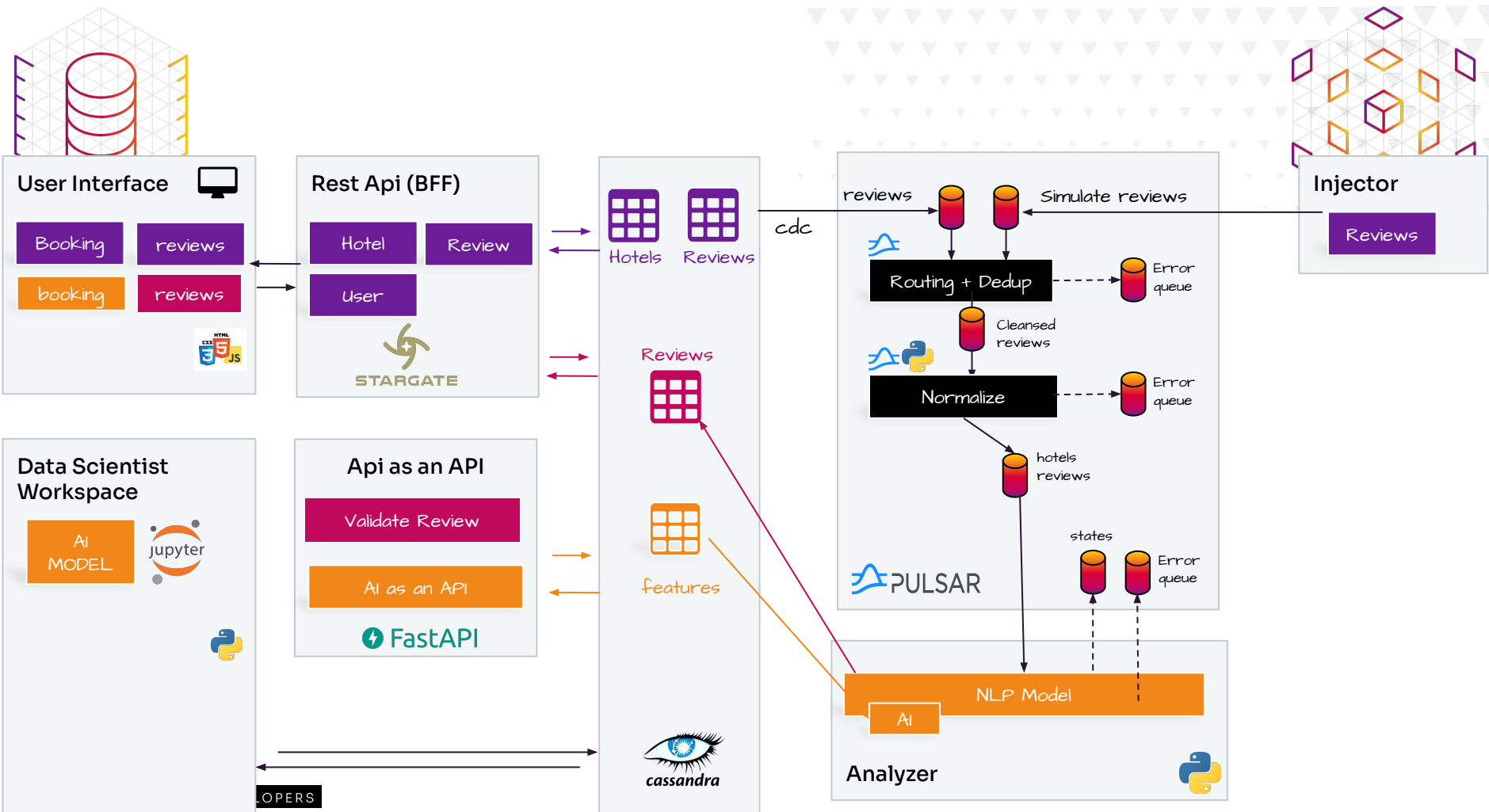


Functions and user flow

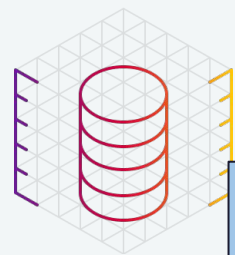


➤ 3-tier System of records





Draft



FAKE GENERATOR

Raw messages are produced: some are reviews. Of these, some are of restaurants. Must be cleaned, filtered, etc.

publish

schemaless
Pulsar topic with
mixed "raw"
contents

consume

Pulsar function
that inspects,
filters, routes
and normalizes
messages

discard

publish



"hotel reviews"
Pulsar topic

publish

"restaurant
reviews" Pulsar
topic

consume

An ever-running
service that consumes,
keeps a state (in part,
exp window average +
stats), exposes current
state and publishes
anomalies "for later
manual inspection"

use as
storage
for state

state (averages, etc)
is maintained
local-to-process

publish

"anomalies to
inspect" P. topic

existing

NEW

Client!
(1) writing
reviews
(2) search
restaurants

REVIEWS
API

Astra DB
(app data, reviews...)

CDC for
newly-inserted
reviews

rerouting
and de-schema
(p.function)

The "API" is
effectively
Stargate's own
REST
API here

read

Astra DB
(analytics result)

periodically update
DB with state
Stargate REST API

expose
current
state

Restaurant "Golden Fork":
5.5/10
User "jkr01": detected as
troll
...

Console
output

Astra DB
training data
FEAST?

jupyter

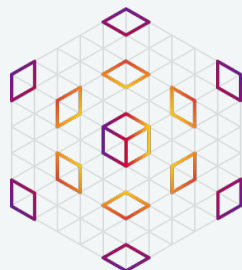
ML
model

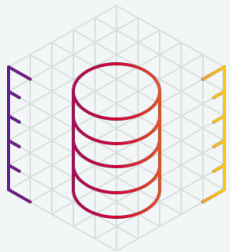
AI as
api

RESULTS API
not directly
Stargate for
reason of
"secrets"

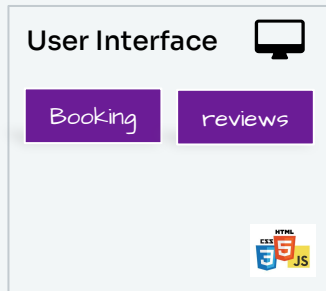
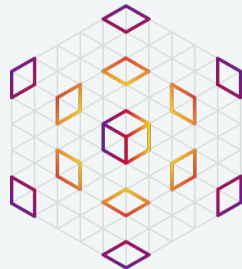
ADMIN
PANEL

DATASTAX DEVELOPERS

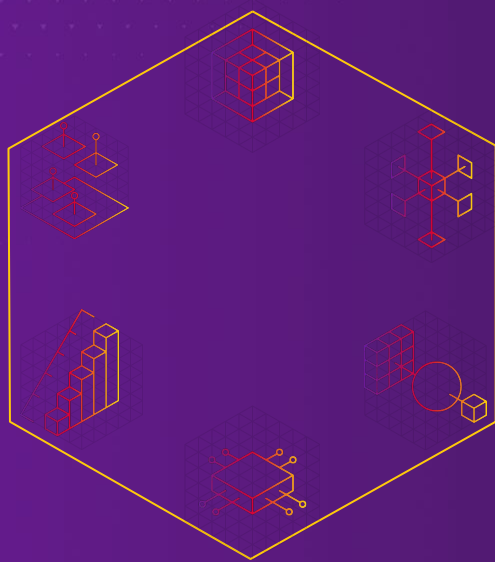
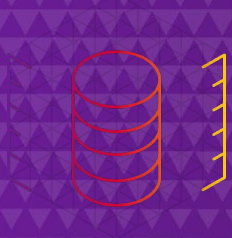




User Interface

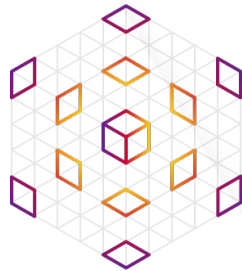
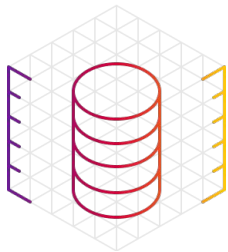


- **Template**
 - <https://freehtmldesigns.com/free-hotel-booking-html-website-templates/>
- **Technologies:**
 - Typescript + React
 - <https://builtin.com/software-engineering-perspectives/create-react-app-typescript>
- **Data Model:**
-



Break 1

We start again at 10:00 (15 MIN)



Thank You