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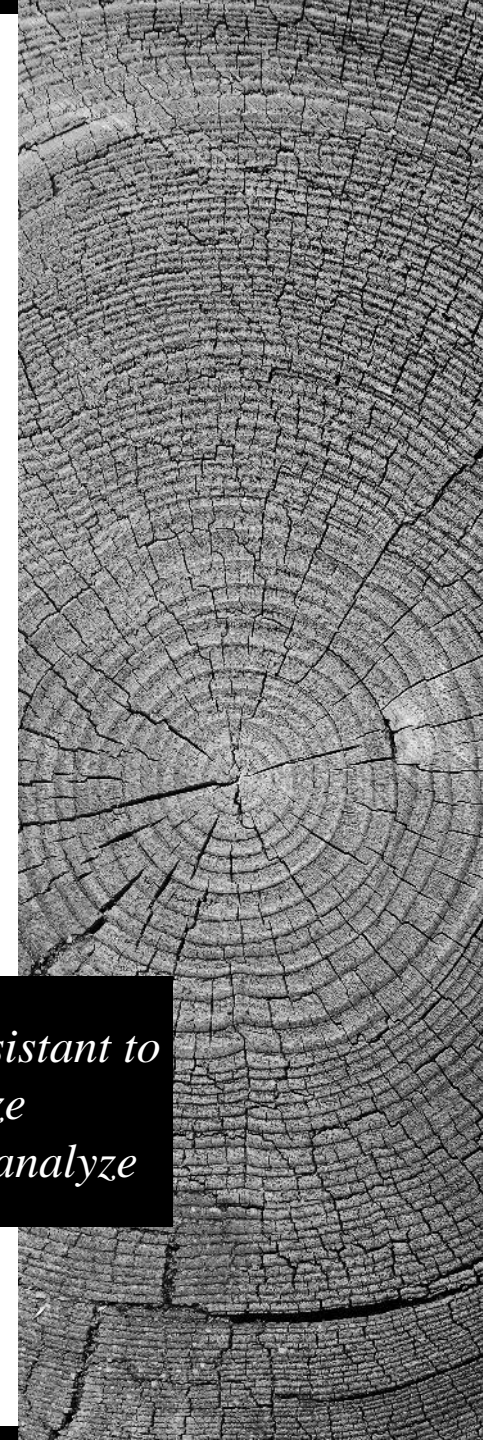
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MEET-UP ASSISTANT

*An AWS based virtual assistant to
recognize people, organize
meetups, collect data, & analyze*



CONTENTS

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IDEA AND INSPIRATION

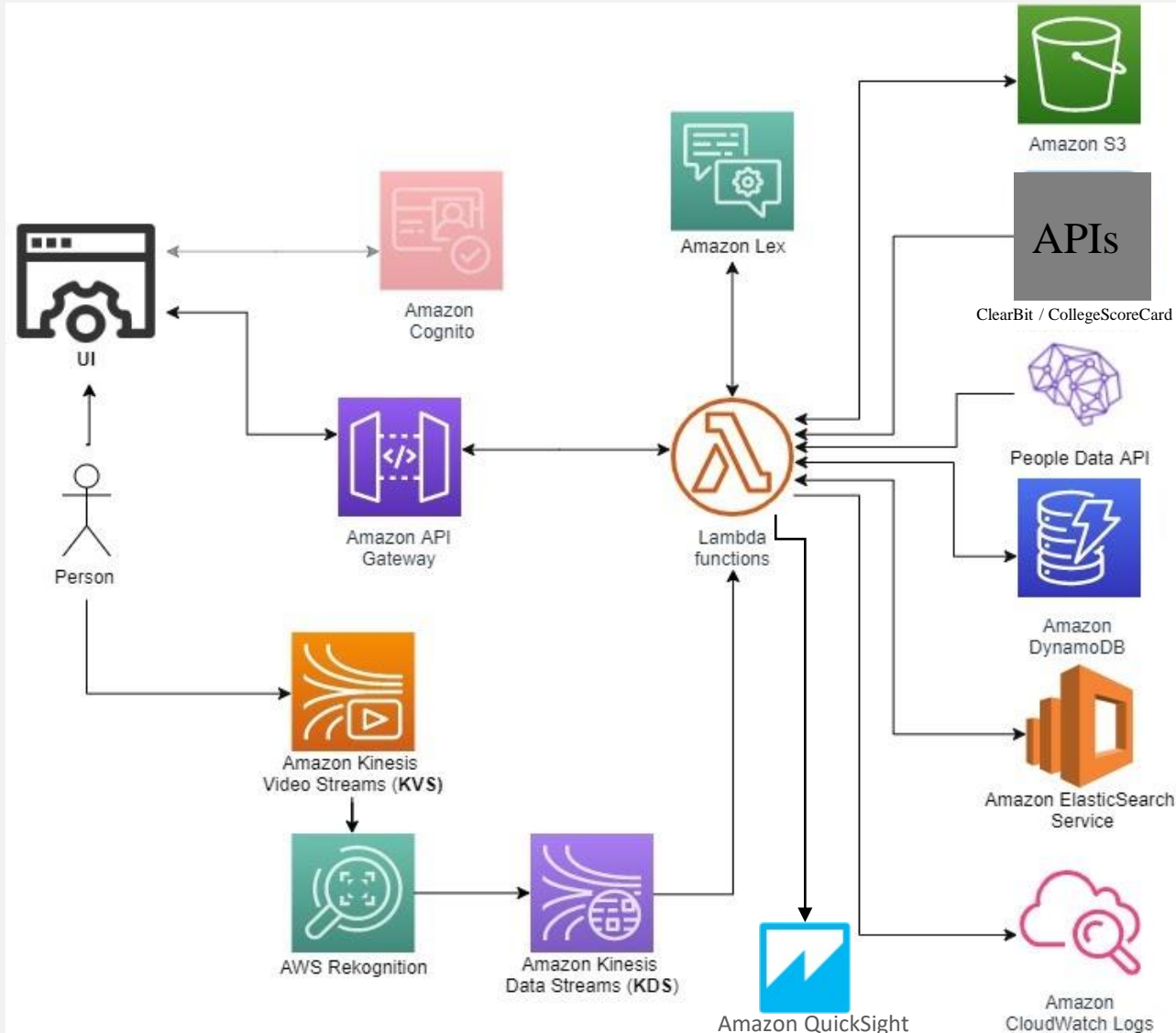
- Meet-ups attract a variety of people
- Not easy to gather all their details
- Maintaining the attendees list is hard
- Insights into the details of the crowd would be valuable

- Introducing... an assistant that can:
 - Recognize people
 - Gather their data
 - Help organize the meetup
 - provide analysis

1. Webcam to KVS
2. KVS to Rekognition
3. Rekognition to KDS
4. KDS to Face Detection Lambda
5. Read Frame and Index Image
6. Store photo unknown person
7. Elastic search for face id
8. Store details in DynamoDB (unk)
9. Send message to SQS
10. Send email with new person photo
11. Webapp polls SQS using ID Pool
12. Check in known guest
13. Register an entry for known user in DB
14. Ask email for unknown guest
15. Lex chat for Unknown user
16. Index unknown user in ElasticSearch
17. Access APIs to gather User Info
18. Store user details in BydamoDB



ARCHITECTURE



- APIS:

- <https://clearbit.com/>
- <https://collegescorecard.ed.gov/data/documentation/>
- <https://www.peopledatalabs.com/>

- Lambdas:

- UI to Lex
- Lex Fulfilment and Store details
- Face Detection and store
- Check in Known People
- QuickSight Analysis

SERVICES

AWS

- AWS Kinesis Video Streams
- Amazon Rekognition
- AWS Kinesis Data Streams
- Amazon Lex
- Amazon APIGateway
- AWS Lambda
- Amazon S3
- Amazon DynamoDB
- Amazon ElasticSearch
- Amazon SQS
- Amazon SES/ Amazon SNS
- Amazon QuickSight

- Amazon Cognito
- Amazon CloudWatch

Others:

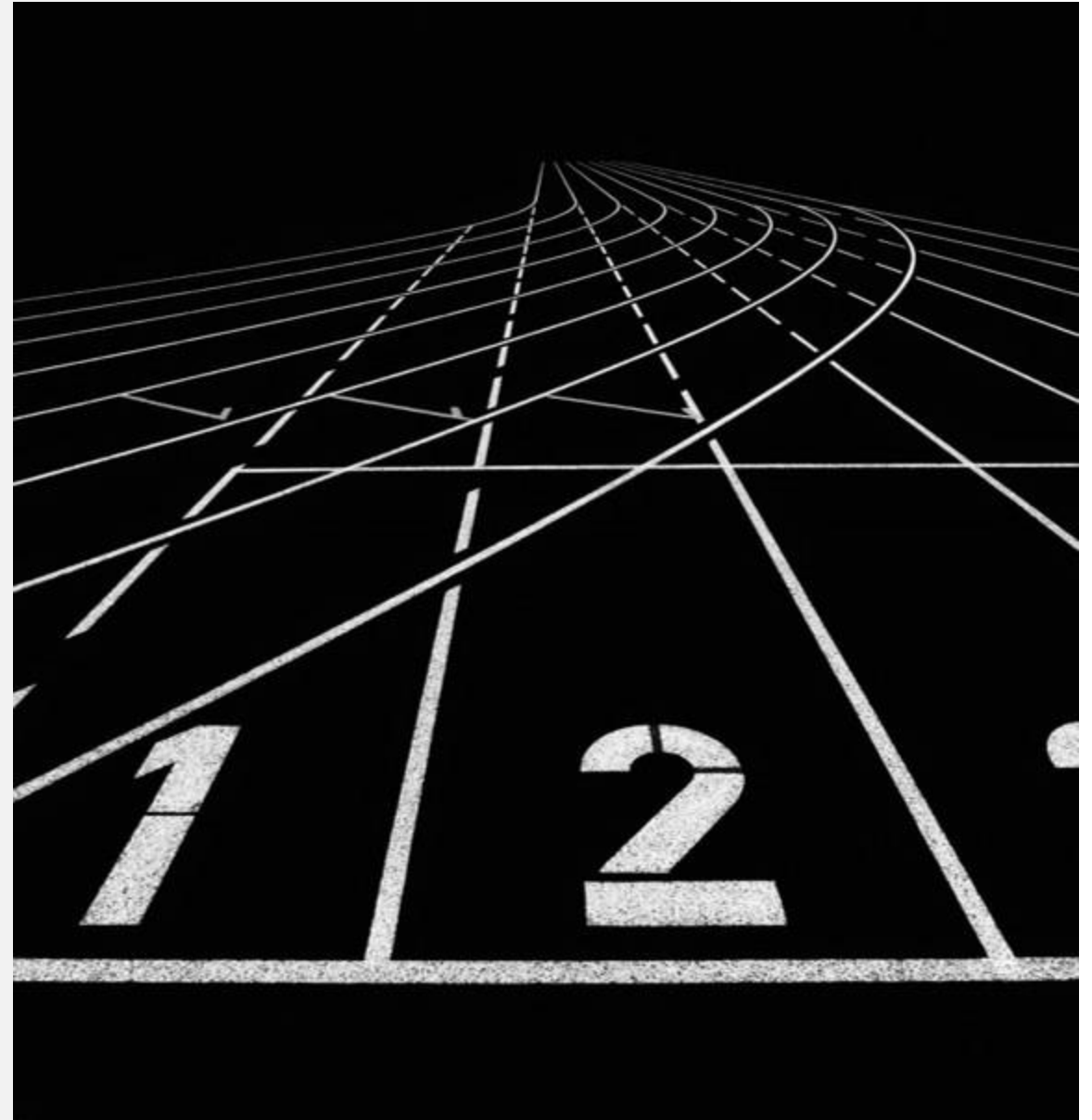
- HTML
- Javascript
- Python
- PeopleData API
- Clearbit API
- CollegeScoreCard API

CHALLENGES

- Facebook Graph API is out of service
- People Data API is inconsistent with many user accounts
- Kinesis Video Streaming with Rekognition is very challenging and unstable
- Rekognition processing abruptly stops at times
- Rekognition identifies faces continuously
- Rekognition is poor at times
- Amazon QuickSight Standard edition does not support many crucial features (sending analyses to UI, Data Pipeline support etc.)
- Limitations on data pipeline to push data DynamoDB to S3
- Challenges in preprocessing the api data to make a uniform and consistent model for all people

FUTURE SCOPE

- Meet-Up is only one application for this idea
- Any ad-hoc meeting can use this application
- Parties, unofficial gatherings can use a quick check-in using facial recognition
- An extension of this idea is to verify students who misplaced their id cards
- Discussion Topic Ranking (choosing the best topic from among the favorite topics gathered from used upon check-in)



DEMO

THANK YOU

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