

CHRISTOPHER SAGAYAM. X  
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Total Experience: 23 years of SOLID IT hands on programming experience



#### **In a nutshell:**

1. Advanced Python programmer
2. AWS certified developer (certificate recently expired)
3. Google Bigquery, AWS Redshift developer
4. AWS Api gateway lambda expert level developer
5. NodeJS/TypeScript programmer
6. PowerBI/Tableau developer
7. Senior Devops/CI/CD and AWS solution architect
8. Complex SQL queries, Aurora postgresql/mysql data analytics

**Enterprise Software Architect:** Can handle client calls. Can create actionable items from clients requirements. Can handle the project individually within budget. Can train freshers. Can design software systems. Can lead a software team. **HandsOn** Programmer

### Experience Milestones

#### Work Experience (my last few projects/contracts in detail)

**Duration** : May 2021 – JULY 2021 (3 months)

**Project - AWS cdk project- infrastructure as code, Python Developer for AWS Lambda API gateways**

#### **Product Summary**

Created AWS CDK infrastructure as code. Created cloudformation templates. AWS lambda scripts using python for api gateways

#### **Responsibilities**

Was responsible for creating aws CDK scripts  
Coded the lambda functions in python 3 for api gateways  
Tested the entire process and flow  
Created the cloudformation templates

**Duration : AUG 2021 – APR 2022 (9 months)**

**Project - Combination of various micro services in financial domain**

### **Product Summary**

The project involved maintaining existing python microservices codebase and also building new microservices. This project is serving the financial sector, contains high performance API gateways, AWS AURORA postgresql databases, load balancers etc

### **Roles and Responsibilities**

I was given a **fourfold** responsibility of Python API Tech lead, Senior Devops/AWS Solution Architect, Business analyst/process and a Trainer/Mentor/Interviewer role.

#### **Devops and AWS solution architect role:**

1. Was responsible for the entire architectural diagram
2. Installing and Configuring Jenkins in a private subnet, url accessible through VPN only
3. Manual PULL build triggers from Jenkins to bitbucket, Jenkins configuration as code
4. Working on circleCI pipelines for a different sub client
5. Creating circleCI CI/CD pipelines
6. Maintaining AWS infrastructure including but not limited to ALB, listener rules, certificates, lambdas, API gateways with custom domains, cloudwatch logs insights, EC2 instances, Large AWS RDS instances, Private/Public Subnets, VPNs, AWS batch, dockers, ECR, fargate, NAT gateway etc
7. Creating Complex and efficient sql queries for developers
8. Create ETL pipeline for data ingestion from s3 buckets to postgresql
9. VPC endpoints for private API gateway
10. Secrets Manager, KMS
11. Athena to query S3 logs elb logs etc
12. Create and manage Complex IAM roles
13. Install and Create and Manage SSO with AZURE AD
14. Create complex cloudformation templates, SAM templates and SAM deployment
15. Conducting PENTESTs, requirements gathering etc
16. Flyway migration was used for database versioning

#### **Tech Lead – Advanced Python programmer role**

1. Hands on advanced python programmer
2. Understood complex existing scripts
3. Convert synchronous existing scripts to asynchronous using python asyncio
4. Create complex python algorithm to calculate financial decision outcomes based on numerous use cases and inputs
5. Python scripts using cerberus validations for input jsons
6. Process complex input JSONs, flattening etc
7. Create automated workflows and tailoring python scripts to adhere to the same
8. Complex database abstraction using PONY module

9. Create python connectors for complex external REST gateways

### **Business Analyst/Process role**

1. Create BPM and DMN diagrams/tables from client specifications and rules
2. Camunda engine for BPMN and DMN evaluations
3. Complex 100 row rules in DMN diagrams/tables
4. Evaluate pyDMN engine

### **Trainer/Mentor/Interviewer/Scrum Master Role**

1. Shortlist resumes from linkedin or naukri
2. Conduct zoom interviews after scheduling them in calendly
3. Ask tech python questions ranging from beginner to complex
4. Decide whether the candidate goes to the next level or not.
5. Once selected train the candidate in Python by giving practical problems
6. Mentor them.
7. Using JIRA extensively
8. Using Monday.com and float.com

**Duration** : APR 2021 – JULY 2021

### **Project - Custom Alexa skill set for doors of large storage facility**

#### **Product Summary**

Built custom alexa skillset, alexa intents, actions which get passed on to aws lambda. The lambda connects with the api gateway in the background and controls the doors. Completely voice activated and taken care of obstructions in doors and multiple overlapping commands etc

#### **Responsibilities**

Was responsible for the entire architectural diagram  
Coded the lambda functions in python 3  
Tested the entire process and flow  
Created the alexa intents and actions

### **Project - Ecommerce application**

**Duration** : Nov 2020 – Mar 2021

#### **Product Summary**

Large e-commerce chain of stores with QR Code scanning

#### **Responsibilities**

Tech lead: Lead a team of developers, testers, business analyst and devops  
Mobile ios and android connects to backend aws REST API  
Coded backend rest api endpoints using aws lambda in python  
Responsible for creating the low level design document (LLD)  
Created the architect diagram for backend data pipeline as well as the API gateways  
Created appsync graphql gateways for product data  
Responsible for administration of aws IAM roles/policies, security etc  
Responsible for creating Infrastructure as code using Cloud formation templates

### **Project - 3rd party Shopping mall footfall data application**

**Duration** : JUL 2020 – OCT 2020

#### **Product Summary**

Online chain of kitchens - Analyze footfall data from safegraph

#### **Responsibilities**

Senior Developer: Responsible for coding and designing the data pipelines  
AWS REST API created to receive high intensity high frequency background http posts from safegraph API engine  
AWS REST API in turn connects to a lambda which in turn populates a sql queue for decoupling  
SWS triggers a lambda which cleans up the data and posts the json to Redshift  
From Redshift a subset of data is piped to PostgreSQL  
PowerBI is used for data analysis from PostgreSQL  
Responsible for designing the entire data pipelines

### **Project - KPI data analysis of ecommerce orders, Data visualization using complex SQL queries**

**Duration** : APR 2020 – JUNE 2020

#### **Product Summary**

Data analysis of ecommerce orders

#### **Responsibilities**

Data Engineer: Responsible for creating complex SQL queries as per requirement  
Analyse 12 months of customer data stored in MySQL databases  
Customer frequency. Repeat Purchase rate  
Customer demographics insights. Most valuable target market  
CPA for instagram influencers, Twitter influencers, Press coverage  
Post promotions giveaway e.g Reddit giveaway analysis  
Product purchase analysis. What is the most purchased product?  
Which products are purchased in groups  
KPI sheet preparation by week. By brands, Product SKU and Channel

**Summary of my Experience:** More than 7 years April 2015 – Till Date

## AWS certified developer associate

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### AWS

AWS Appsync GraphQL	High performance aws appsync graphql gateway Cognito Authenticated Secure gateway Highly efficient Lambda Resolvers Multiple Data Sources for the gateway Gateway configured behind WAF Uses AppSync Functions Advanced Request mapping and Response mapping templates
AWS DynamoDB	Very fast reads and writes Uses Batch reads and Batch writes Schema design for fast retrieval of data Appropriate prefixes, suffixes for Partition Key and Sort Key Even distribution of Primary key was ensured. Point in time backups configured Over 2 million records accessed with ease MAP document datatype used for holding complex nested JSON Data GSI was configured DynamoDB Streams were configured for OLAP ingestion and processing
AWS Glue	Heavy lifting using the powerful aws glue. Glue python spark ETL scripts ETL from aws redshift to S3 and vice versa. Powerful Spark transformations. Million row file transfers accomplished with ease Complex JSON inside CSV files Files without any defined Schema Creating CUSTOM complex AWS CRAWLER CLASSIFIERS Cloudwatch triggers for glue scripts Transfer subset of data from Redshift to Postgres for analysis by Tableau.
AWS Lambda	ETL scripts using lambda Run COPY/UNLOAD stored procedures using aws lambda Lambda Chaining. Custom logging in lambda functions Both python and nodeJS lambda programming Using lambda for AWS gateway Triggering lambda endpoints using Cloudwatch Decoupling of intensive processes using aws SQS and processing the messages using a lambda endpoint. Completely serverless hosting using aws lambda and S3 with angularJS Using custom libraries with lambda layers Python and NodeJS lambda scripting

AWS REST Gateway	<p>Configuring AWS gateway with lambda endpoints</p> <p>Directly using SQS endpoint for lambda gateway using mapping templates</p> <p>Completely serverless dynamic scripts using AngularJS with serverless</p> <p>Using lambda authorizers for most secure AWS gateway experience</p> <p>Creating REST API gateway. API can be consumed by a variety of clients.</p> <p>Throttling of HTTP requests in the gateway</p> <p>Exposing only a limited amount of data from databases like DynamoDB etc.</p>
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AWS Redshift	<p>Administering Redshift data warehouse and Redshift Spectrum.</p> <p>Distributing the data amongst the nodes efficiently</p> <p>COPYing and UNLOADing data using glue, lambda</p> <p>Extracting a subset of data from a huge table to Postgres on a daily basis for further analysis using BI tools like quicksight, powerBI etc</p> <p>Designing table schema based on end use cases</p> <p>Using Redshift SYSTEM tables and commands to monitor the database continuously.</p> <p>Converting complex JOIN queries from one db format to another</p> <p>S3 to Redshift, Redshift to S3</p>
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<p>AWS RDS</p> <p><i>Postgresql</i></p> <p><i>Mysql</i></p> <p><i>Sql Server</i></p> <p><i>Aurora</i></p>	<p>Converting complex SQL from one db type to another</p> <p>Configuring auto scaling both vertically and horizontally</p> <p>Horizontal read replicas to cater to increased load</p> <p>Plus fail proof and solid backup plans</p>
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AWS VPC	<p>Creating and administering complex aws networks VPC</p> <p>Replicating on premise networks on AWS using custom VPC</p> <p>Creating secure private subnets, public subnets</p> <p>Using NAT gateway, IG</p> <p>Creating peering VPCs</p> <p>VPC endpoints</p> <p>Configuring glue, lambda for whitelisted IP address requirements</p> <p>Jump Server/ Bastion hosts for more secure instance administration</p> <p>Setting up subnets for load balancing groups</p>
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AWS- Other services	<p>Load balancers and auto scaling setup</p> <p>AWS elastic bean stalk setup</p> <p>AWS kubernetes service</p> <p>AWS <b>athena</b> complex queries to query S3 files directly</p>
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	AWS Redshift <b>spectrum</b> to query S3 Using <b>cloudfront</b> to distribute content globally Completely serverless hosting using S3, angularjs, lambda, dynamodb AMAZON video encoding and live video streaming <b>APPSYNC</b> for graphql gateways AWS Fargate for dockers AWS EMR for huge file processing and map reducing
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## BI

PowerBI	Creating complex visualizations through powerBI Sifting through multiple excel files, choosing the correct set of data and displaying only meaningful data Use odf datafeeds as data sources Live updation of powerBI visualizations Creating neat and elegant powerBI reports Used complex calculated columns and measures Powerful DAX programming
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## Devops

CI/CD pipeline from git commit to lambda deployment using jenkins and gitlabrunner  
 Deployment to kubernetes and dockers  
 Code quality checks integration using sonarqube  
 Monitoring infrastructure

## Containers

Deploying applications on Kubernetes.  
 Converting existing applications to SaaS and suitable for kubernetes deployment.

## Google Cloud

Deploying applications on Google Kubernetes.  
 Cloud Dataflow for complex ETL.  
**Bigquery** for injecting large amounts of data and running useful queries on the data  
 Simple ML using Bigquery  
 Cloud pub/sub  
 Cloud Bigtable  
**Firebase** realtime database

## ML

TensorFlow on Google Cloud  
 Cloud Vision API on google cloud  
 Python Keras and Pandas

8 years experience April 2008 – April 2016

**Frameworks:**

CodeIgniter Development  
CakePHP programming  
Laravel development  
Django programming  
Flask programming  
RoR development

**Applications:**

Opencart programming  
Cubecart Development  
Moodle programming  
Zencart Development  
Magento2 development

9 years experience April 1999 to April 2008

Leading a team of about 20 programmers.  
We completed a range of projects in Php RoR Java jQuery etc.