

# Machine Learning Inference with **AWS Lambda** and **Amazon EFS**

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Principal Developer Advocate

AISPL



# What we are going to **build** ?



# Let's focus on **this...**



# Architecture



Client Application



# Architecture



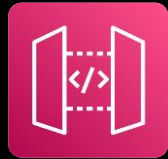
Client Application



User Request



Amazon API Gateway



# Architecture



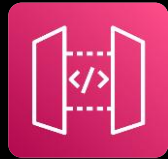
Client Application



User Request



Amazon API Gateway



Invoke



AWS Lambda



# Architecture



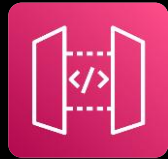
Client Application



User Request



Amazon API Gateway



Invoke



AWS Lambda



Loading Models



Amazon Elastic File System  
(Amazon EFS)



# Architecture



Client Application



User Request



Amazon API Gateway



Invoke



AWS Lambda



ML Engineer



Uploading Models



Amazon Simple Storage Service (Amazon S3)



Loading Models



Amazon Elastic File System (Amazon EFS)





# Architecture



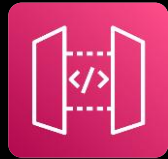
Client Application



User Request



Amazon API Gateway



Invoke



AWS Lambda



ML Engineer



Loading Models



Uploading Models



Amazon EFS



AWS Lambda



Amazon S3



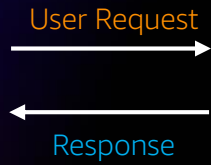
Trigger



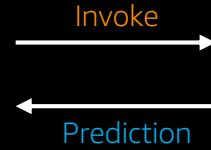
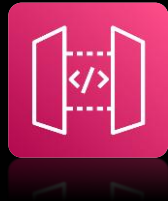
# Architecture



Client Application



Amazon API Gateway



AWS Lambda



ML Engineer



Loading Models

Uploading Models

Amazon EFS



AWS Lambda



Amazon S3



Trigger

# Architecture



Client Application



User Request  
Response

Amazon API Gateway



Invoke  
Prediction



AWS Lambda



ML Engineer



Uploading Models

Loading Models

Amazon EFS



AWS Lambda



Amazon S3



Trigger



# Architecture

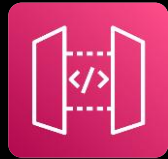


Client Application



User Request  
Response

Amazon API Gateway



Invoke  
Prediction



AWS Lambda



ML Engineer



Loading Models

Uploading Models

Amazon EFS



AWS Lambda



Amazon S3



Trigger

# Architecture



Client Application



User Request  
Response

Amazon API Gateway



Invoke  
Prediction



AWS Lambda

app2 (ml-inference)



ML Engineer



Loading Models

Uploading Models

app1 (s3-efs)

Amazon EFS



AWS Lambda



Amazon S3



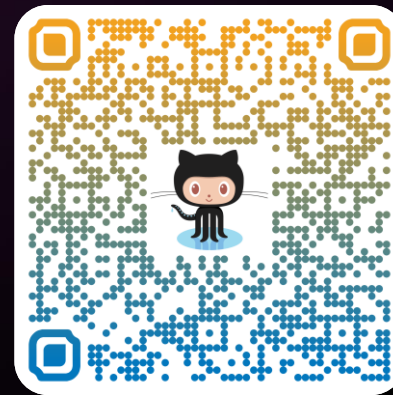
Trigger

# Demo

- Deploy both the application using AWS SAM (Serverless Application Model)
- Perform the inference via Postman

Github

[/aws-samples/ml-inference-using-aws-lambda-and-amazon-efs](#)



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