
AWS
re:Invent
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PEX206

Building a computer vision application for retail inventory

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Computer vision in retail



Measure path to purchase and produce heatmaps



Count people and manage queues



Detect security and operational incidents



Manage inventory and out-of-stock items

aws

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Inventory management

Are products in the correct section?

Are products on the correct shelf?

Are products (nearly) out of stock?

Are products arranged neatly?

Are products labeled correctly?



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Architecture

What you will do in this workshop



Main AWS account

Amazon S3 bucket

AWS Lambda

Amazon SNS

fanout

Participant AWS account

Amazon CloudFront

Amazon S3 bucket

AWS Lambda

Invoke endpoint

Amazon SageMaker endpoint

Deploy model

You

Raw images

Amazon S3 bucket

Amazon SageMaker Ground Truth

Labeled images

Amazon S3 bucket

Amazon SageMaker training Job

Train model

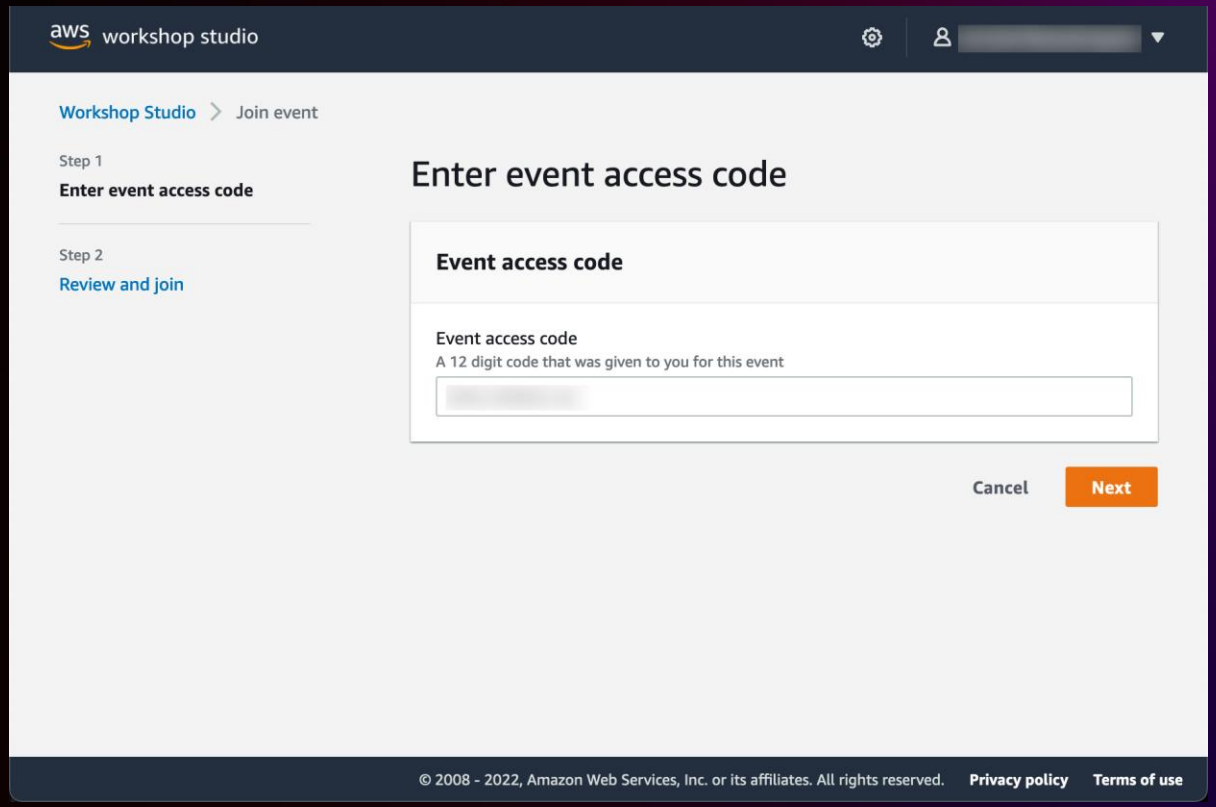
Amazon SageMaker notebook

You

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Step 1: Enter event access code

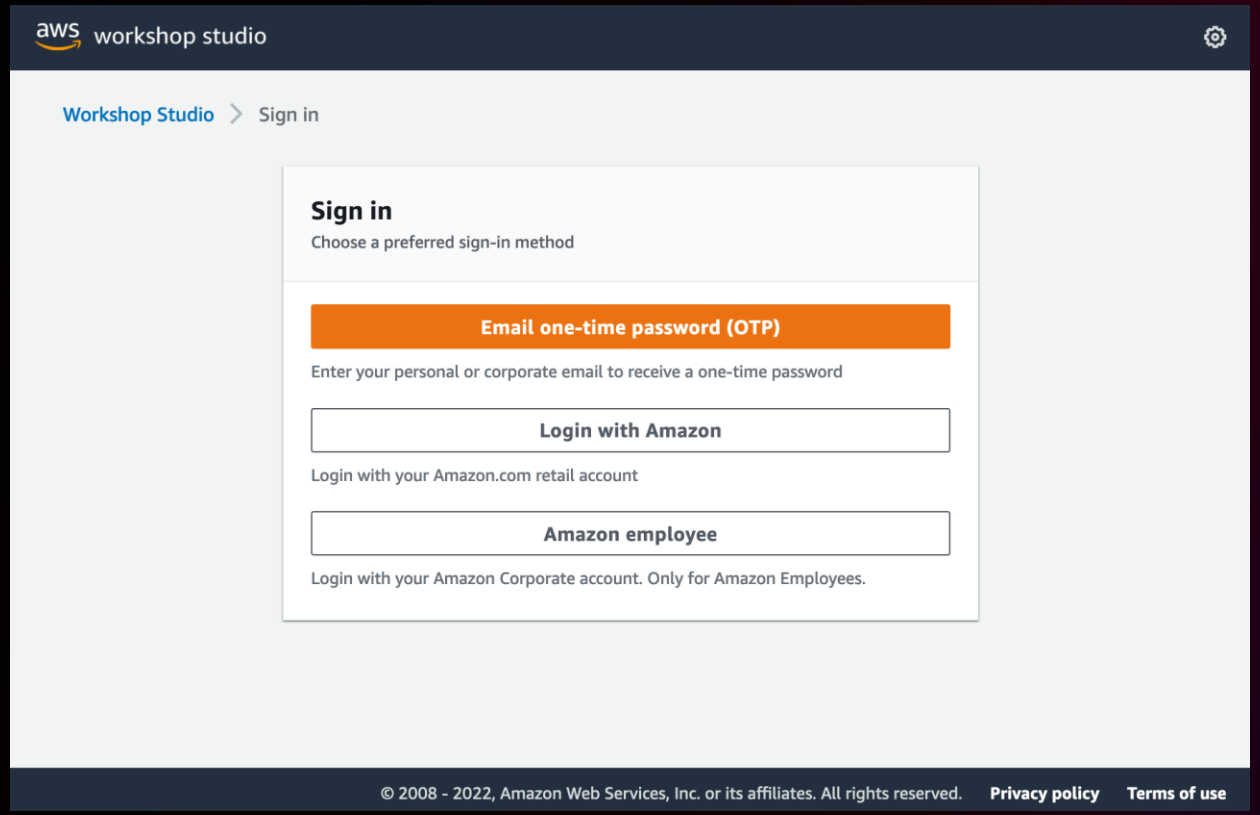
Go to https://catalog.workshops.aws/join and enter the 12-digit event access code



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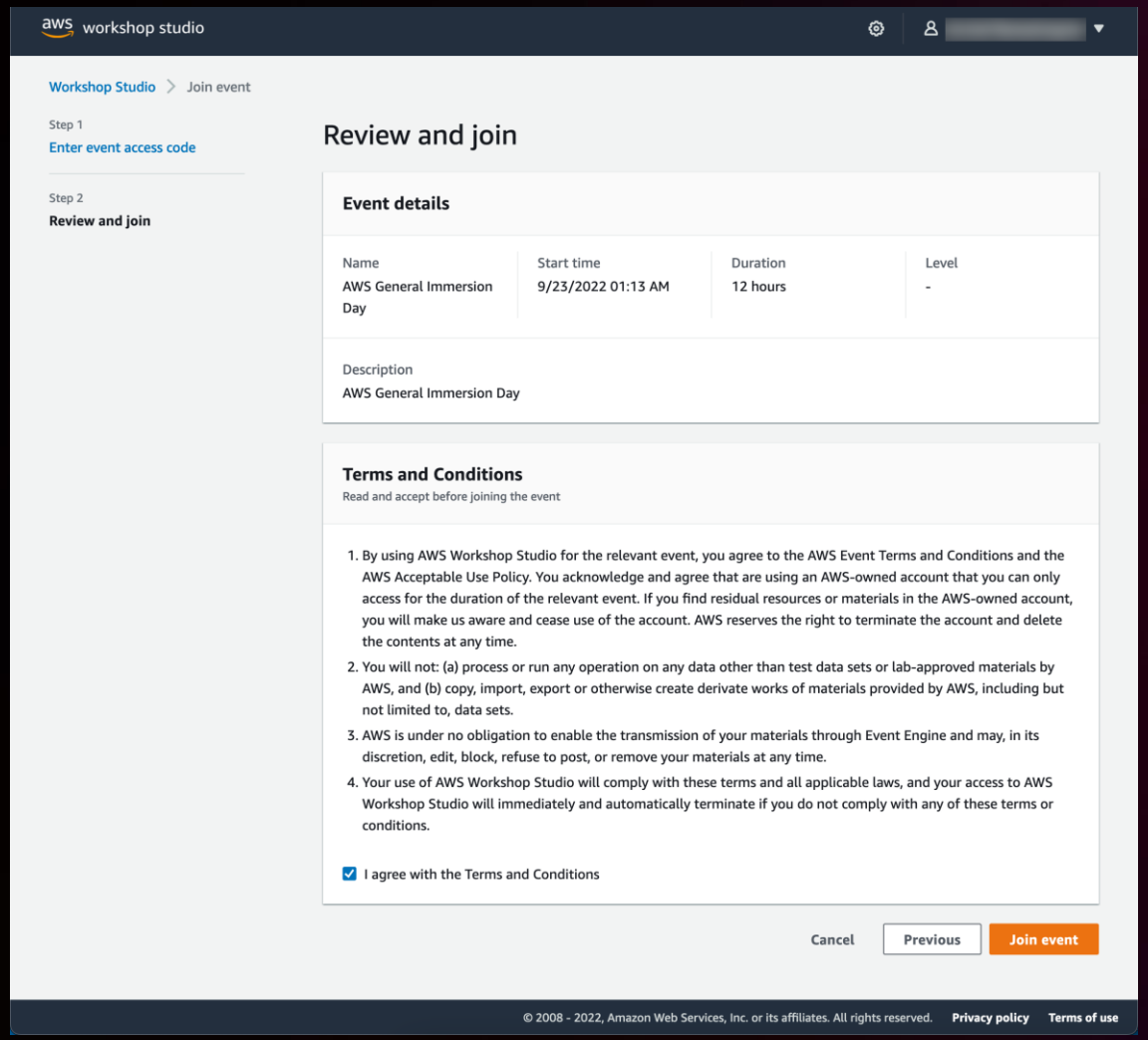
Step 2: Sign in using OTP

Choose Email one-time password (OTP) and enter your email address. You will receive a one-time code in your inbox.



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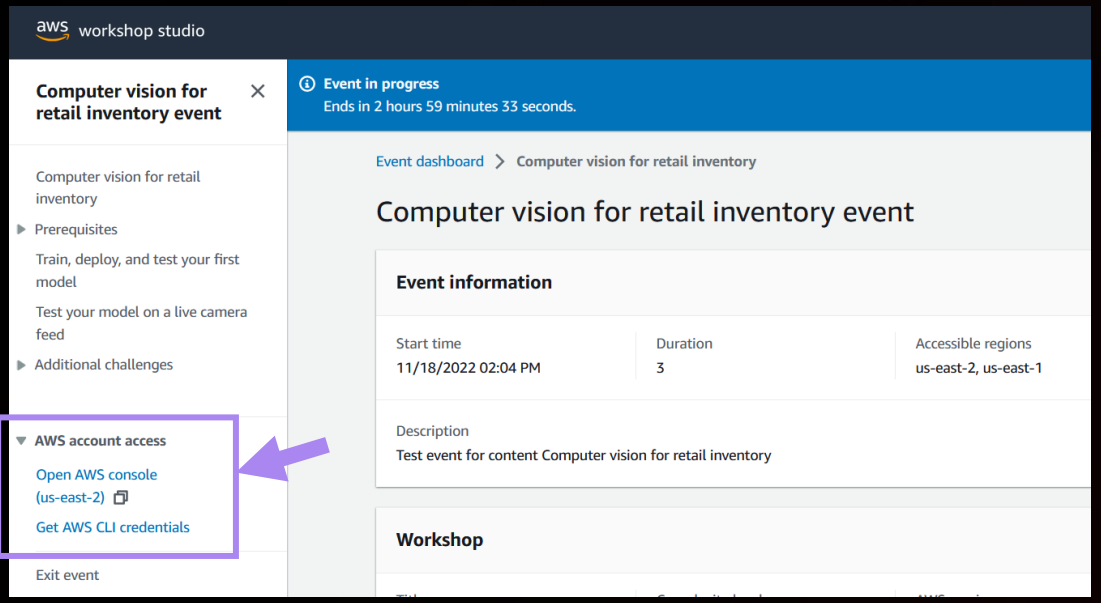
Step 3: Review terms and join event

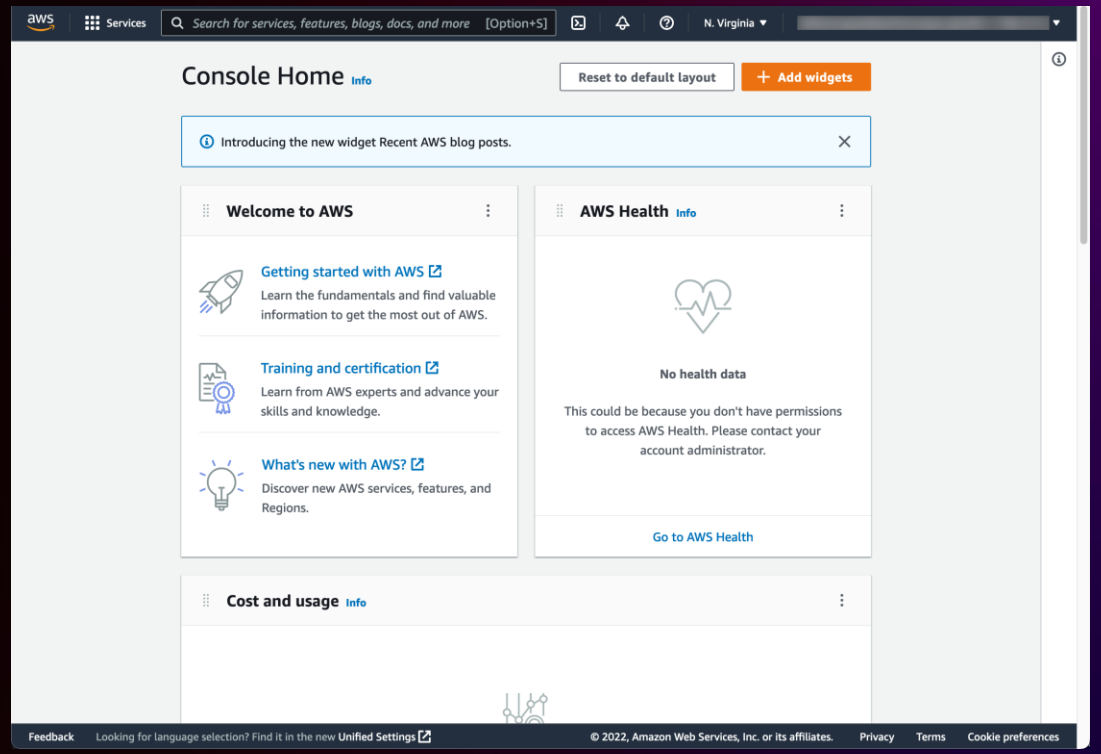


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Step 4: Access AWS account

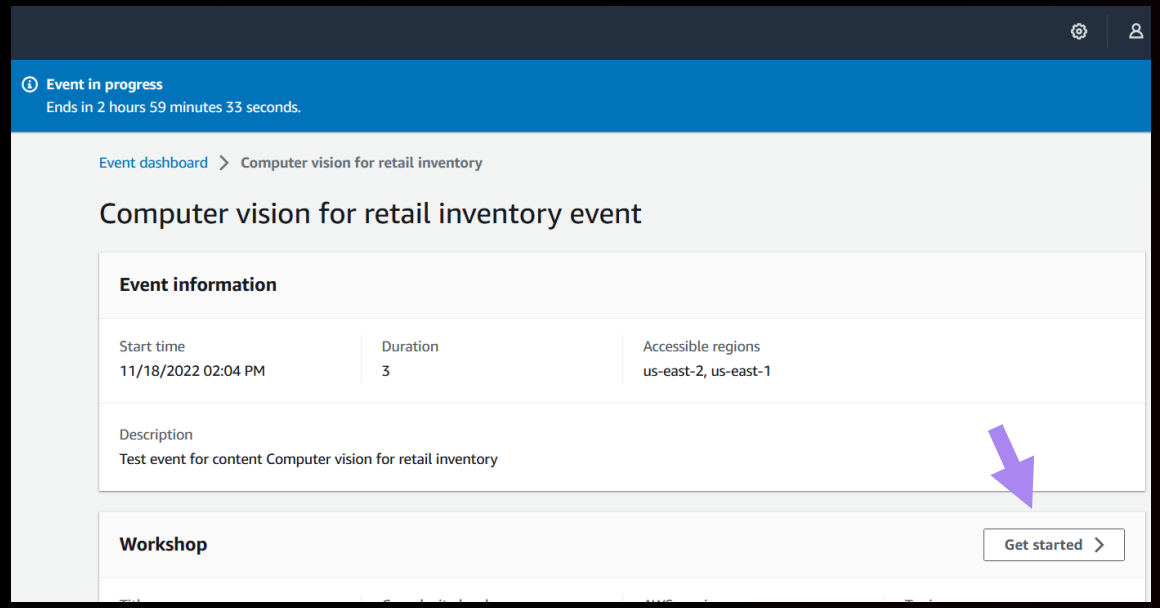
Access the AWS Console or generate AWS CLI credentials as needed

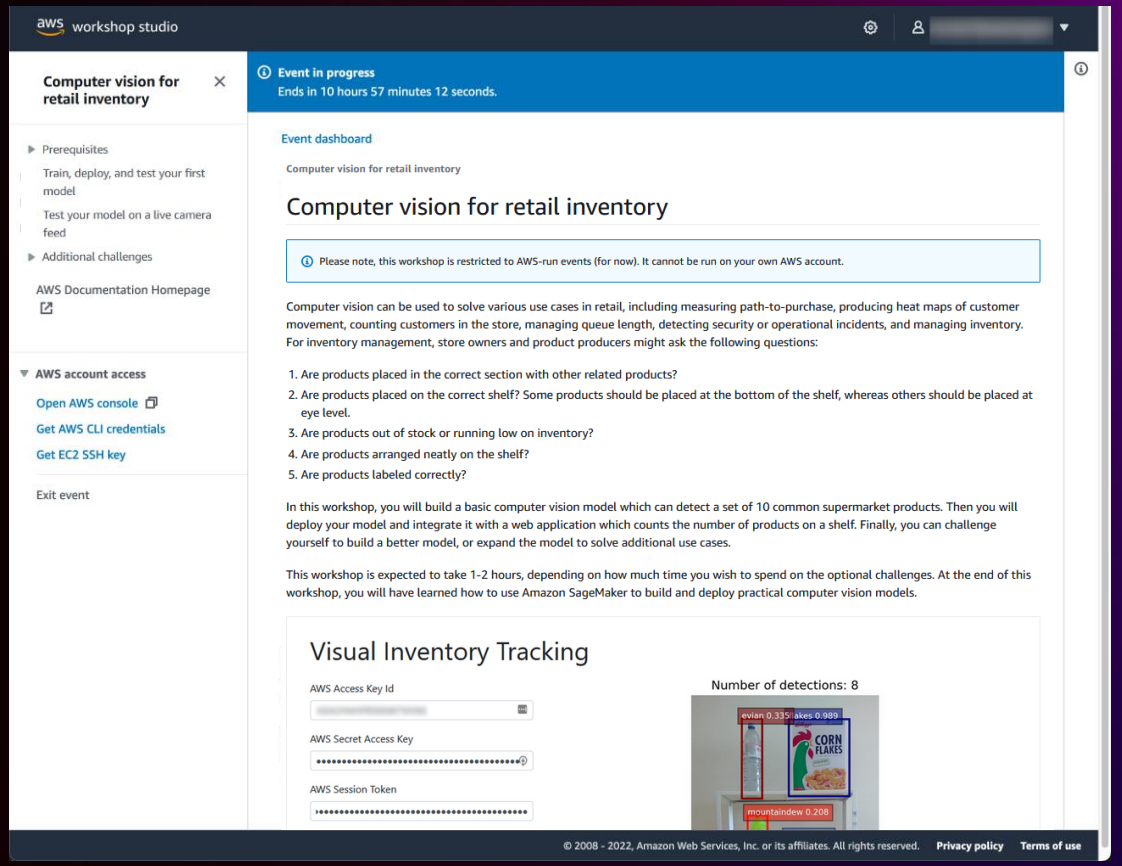




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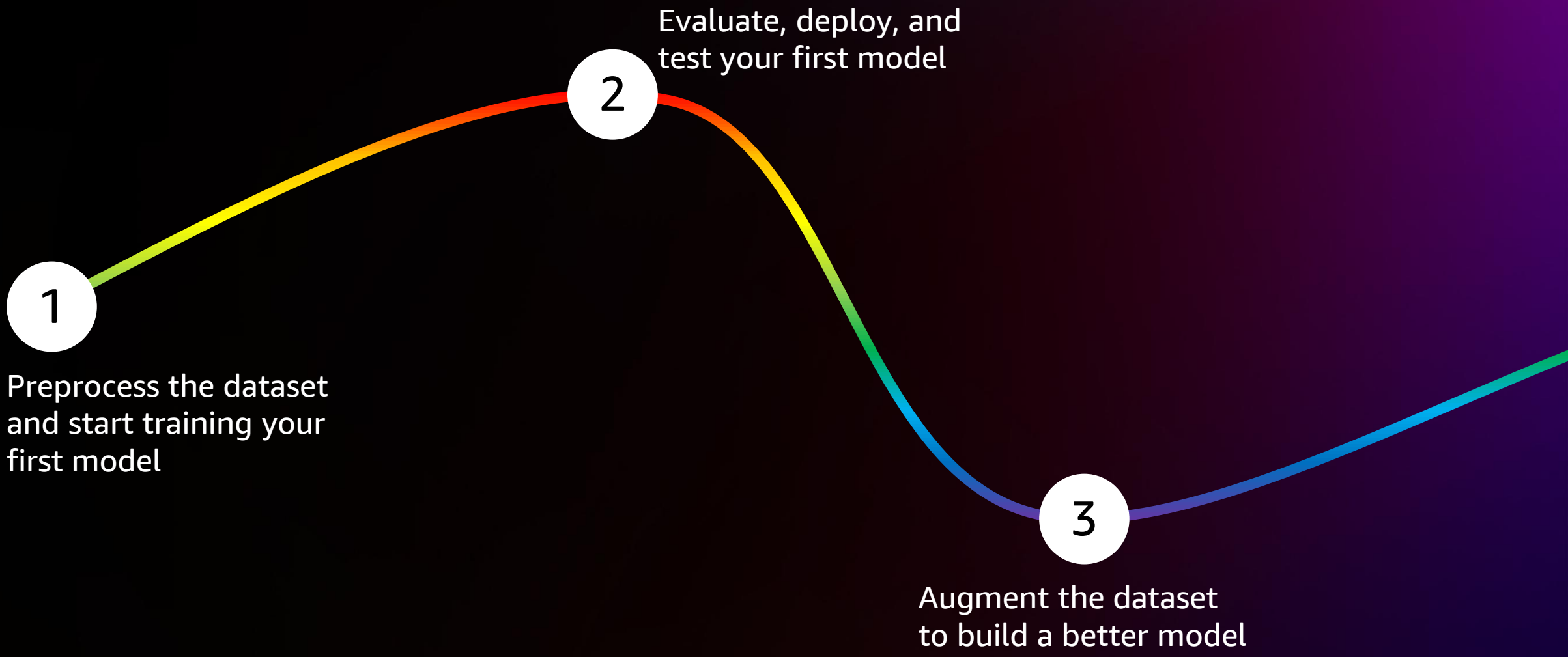
Step 5: Get started with the workshop





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What you will do today

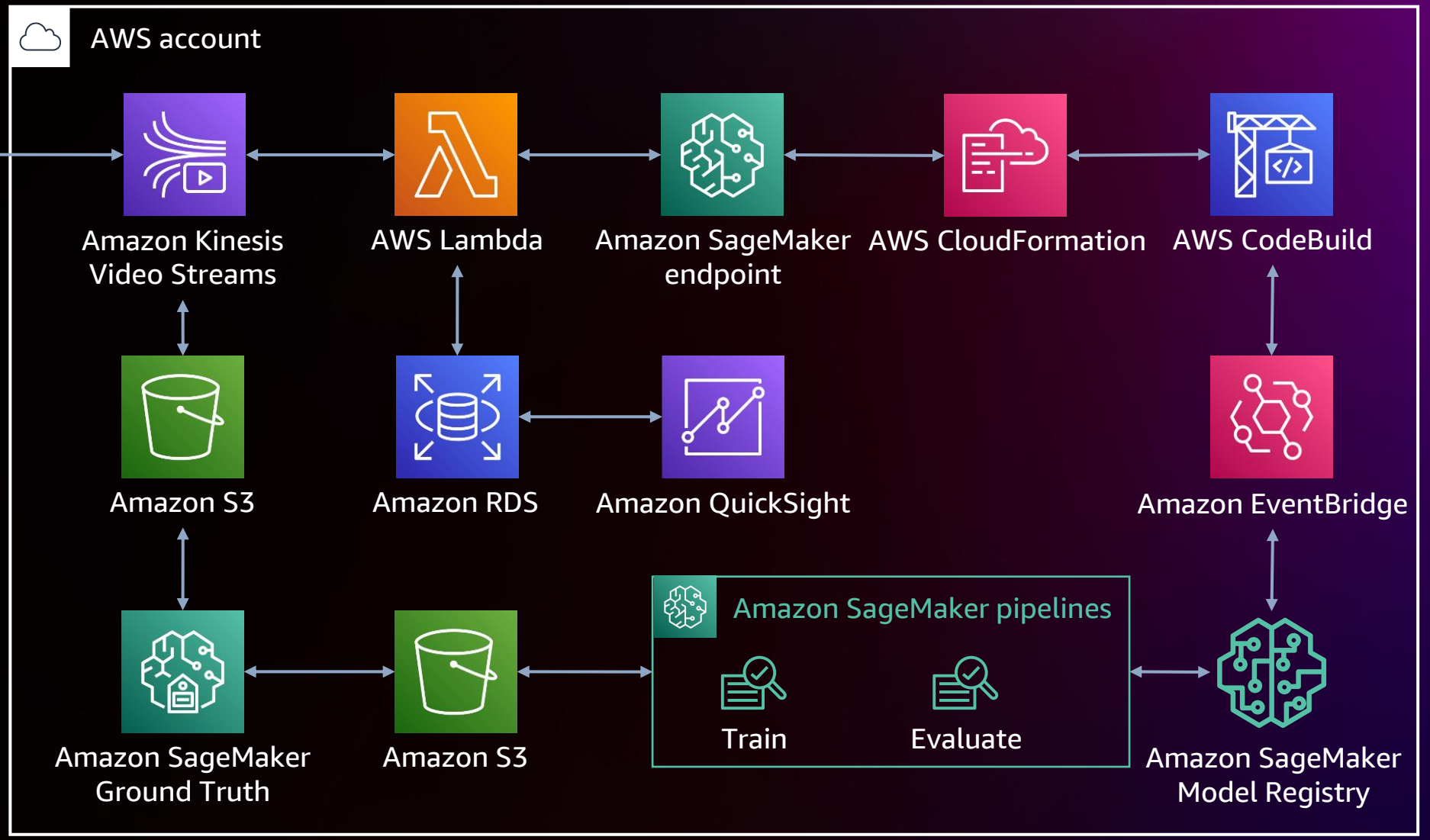


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Scaling the architecture







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Think big - Amazon Go

Just Walk Out technology transforms the customer experience through checkout-free shopping based on

- Computer vision
- Sensor fusion
- Deep learning algorithms



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Thank you!



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