

Task: [Amazon Rekognition Custom Labels](#)

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Project Overview

This project demonstrates the use of **Amazon Rekognition Custom Labels** to train and evaluate a custom image recognition model.

It involves creating a project, preparing datasets, training the model, and evaluating its performance.

Architecture

The system uses **AWS Rekognition Custom Labels** to:

1. Create a project for object detection.
2. Prepare training and testing datasets.
3. Train a custom image recognition model.
4. Evaluate performance and analyze metrics.

Datasets

- **Training Dataset:** Labeled images used to train the custom model.
- **Testing Dataset:** Labeled images used to validate model accuracy.

Process

1. **Project Creation**
 - Created a new project in **AWS Rekognition Custom Labels Console**.
2. **Dataset Upload**

- Uploaded labeled datasets to S3 and linked them to the project.

3. Model Training

- Initiated training using the training dataset.

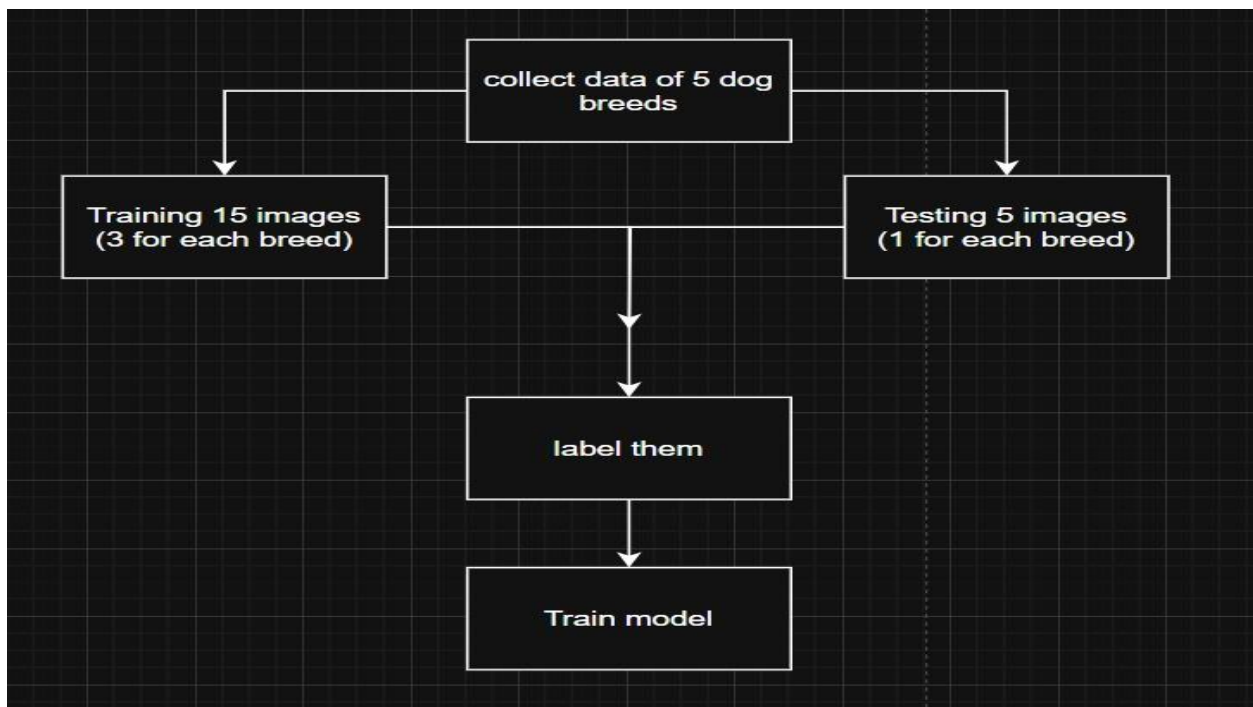
4. Model Evaluation

- Tested using the testing dataset.
- Collected **evaluation metrics** (Precision, Recall, F1-score).

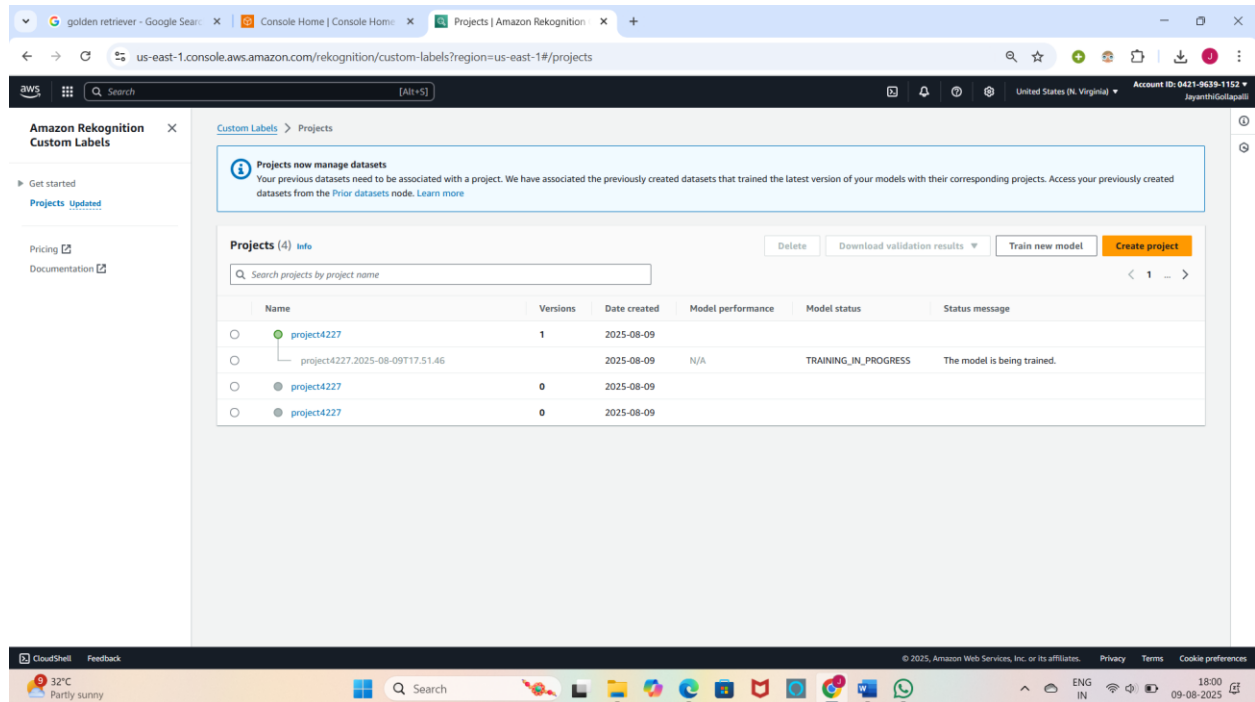
Results & Metrics

- Model successfully trained and evaluated.
- Performance metrics indicate the model's effectiveness for the chosen dataset.

Architecture:



Project Created:



Amazon Rekognition Custom Labels

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Custom Labels > Projects

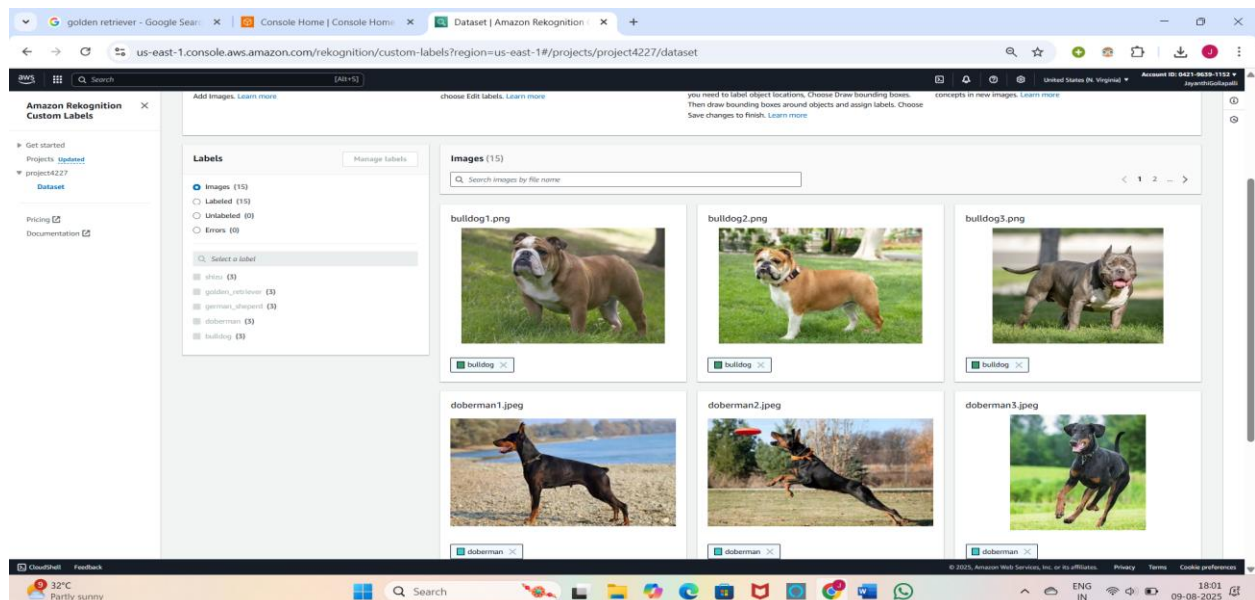
Projects now manage datasets
Your previous datasets need to be associated with a project. We have associated the previously created datasets that trained the latest version of your models with their corresponding projects. Access your previously created datasets from the [Prior datasets](#) node. [Learn more](#)

Projects (4) info Delete Download validation results Train new model Create project

Search projects by project name

Name	Versions	Date created	Model performance	Model status	Status message
project4227	1	2025-08-09			
project4227-2025-08-09T17:51:46					
project4227	0	2025-08-09	N/A	TRAINING_IN_PROGRESS	The model is being trained.
project4227	0	2025-08-09			
project4227	0	2025-08-09			

Training dataset:



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Add Images. [Learn more](#)

Choose Edit labels. [Learn more](#)

you need to label object locations. Choose Draw bounding boxes. Then draw bounding boxes around objects and assign labels. Choose Save changes to finish. [Learn more](#)

concepts in new images. [Learn more](#)

Labels Manage labels

☒ Images (15)
☐ Labeled (15)
☐ Unlabeled (0)
☐ Errors (0)

Select a label

- sharpei (5)
- golden_retriever (3)
- german_shepherd (3)
- doberman (5)
- bulldog (3)

Images (15)

Search images by file name

bulldog1.png

bulldog2.png

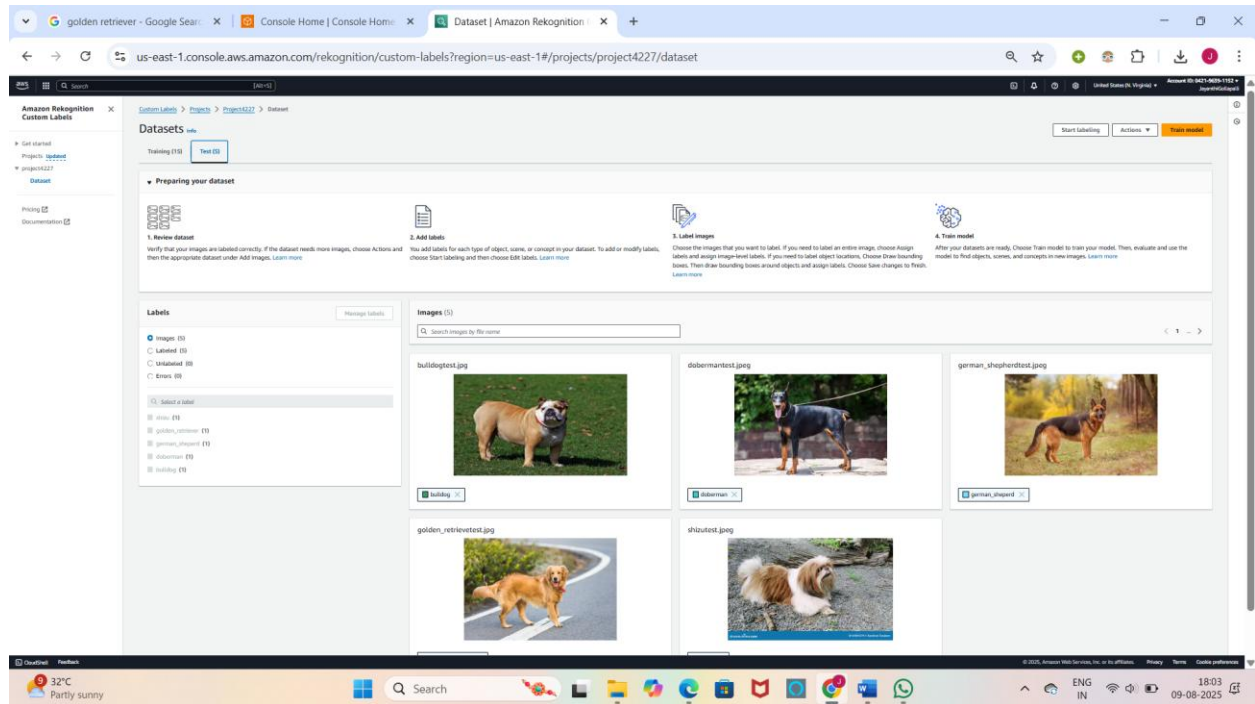
bulldog3.png

doberman1.jpeg

doberman2.jpeg

doberman3.jpeg

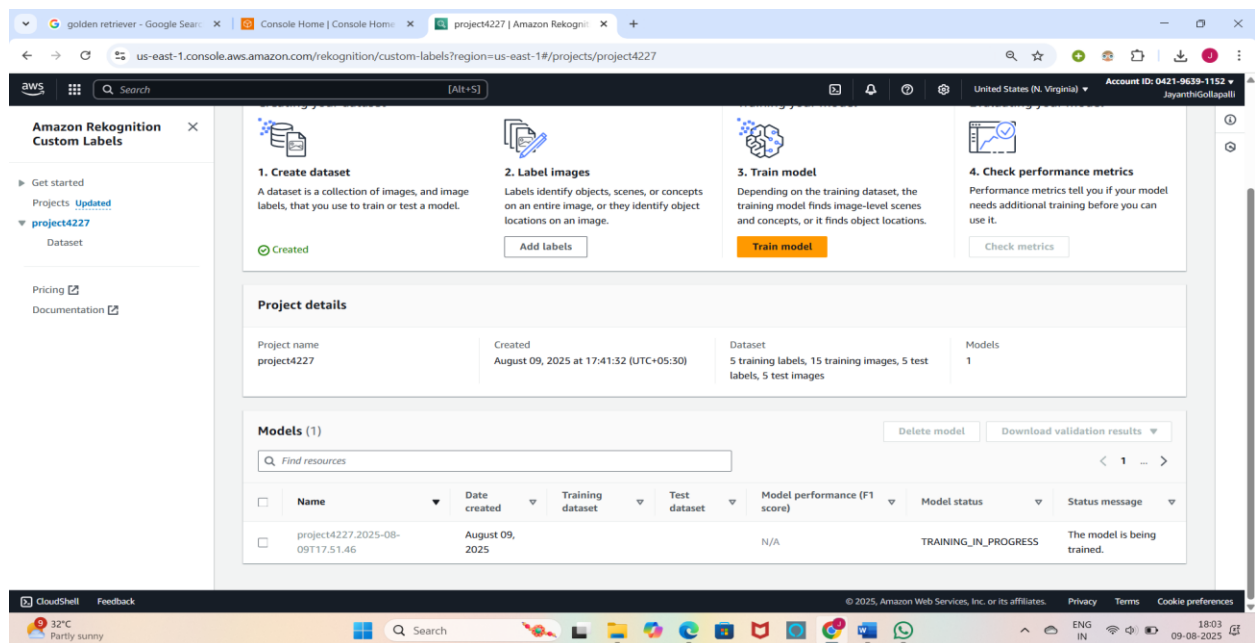
Testing Dataset:



The screenshot shows the Amazon Rekognition Custom Labels console for project4227. The 'Preparing your dataset' section is active, showing a list of images and their labels. The 'Images (5)' list contains the following items:

Image Name	Label
bulldogtest.jpg	bulldog
doberman.jpg	doberman
german_shepherd.jpg	german_shepherd
golden_retriever.jpg	golden_retriever
shiba.jpg	shiba

Model Training:



The screenshot shows the Amazon Rekognition Custom Labels console for project4227. The 'Model Training' section is active, showing the 'Project details' and 'Models (1)' table.

Project details

Project name	Created	Dataset	Models
project4227	August 09, 2025 at 17:41:32 (UTC+05:30)	5 training labels, 15 training images, 5 test labels, 5 test images	1

Models (1)

Name	Date created	Training dataset	Test dataset	Model performance (F1 score)	Model status	Status message
project4227-2025-08-09T17.51.46	August 09, 2025			N/A	TRAINING_IN_PROGRESS	The model is being trained.

Model Trained:

Amazon Rekognition Custom Labels

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Projects Updated

▼ project4227

Dataset

Pricing

Documentation

Custom Labels > Projects > project4227

project4227

How it works

Creating your dataset

1. Create dataset

A dataset is a collection of images, and image labels, that you use to train or test a model.

Created

2. Label images

Labels identify objects, scenes, or concepts on an entire image, or they identify object locations on an image.

Add labels

Training your model

3. Train model

Depending on the training dataset, the training model finds image-level scenes and concepts, or it finds object locations.

Train model

Evaluating your model

4. Check performance metrics

Performance metrics tell you if your model needs additional training before you can use it.

Check metrics

Project details

Project name

project4227

Created

August 09, 2025 at 17:41:32 (UTC+05:30)

Dataset

5 training labels, 15 training images, 5 test labels, 5 test images

Models

1

Models (1)

Find resources

Name

Date created

Training dataset

Test dataset

Model performance (F1 score)

Model status

Status message

project4227.2025-08-09T17.51.46

August 09, 2025

1.000

TRAINING_COMPLETED

The model is ready to run.

CloudShell Feedback

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Model Evaluation And Metrics:

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project4227.2025-08-09T17.51.46

Model details

Use model

Tags

Delete model

Evaluation

The Evaluation tab shows the testing results for your trained model. This helps you understand the overall performance of your model. To view the results for an image, choose the View test results button.

Evaluation results

View test results

F1 score

1.000

Average precision

1.000

Overall recall

1.000

Date completed

August 09, 2025

Training dataset

5 labels, 14 images

Testing dataset

5 labels, 5 images

Trained in 0.171 hours

Per Label performance (5)

Find labels

Label name	F1 score	Test images	Precision	Recall	Assumed threshold
bulldog	1.000	1	1.000	1.000	0.658
doberman	1.000	1	1.000	1.000	0.757
german_shepherd	1.000	1	1.000	1.000	0.507
golden_retriever	1.000	1	1.000	1.000	0.537
shizu	1.000	1	1.000	1.000	0.321

CloudShell Feedback

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