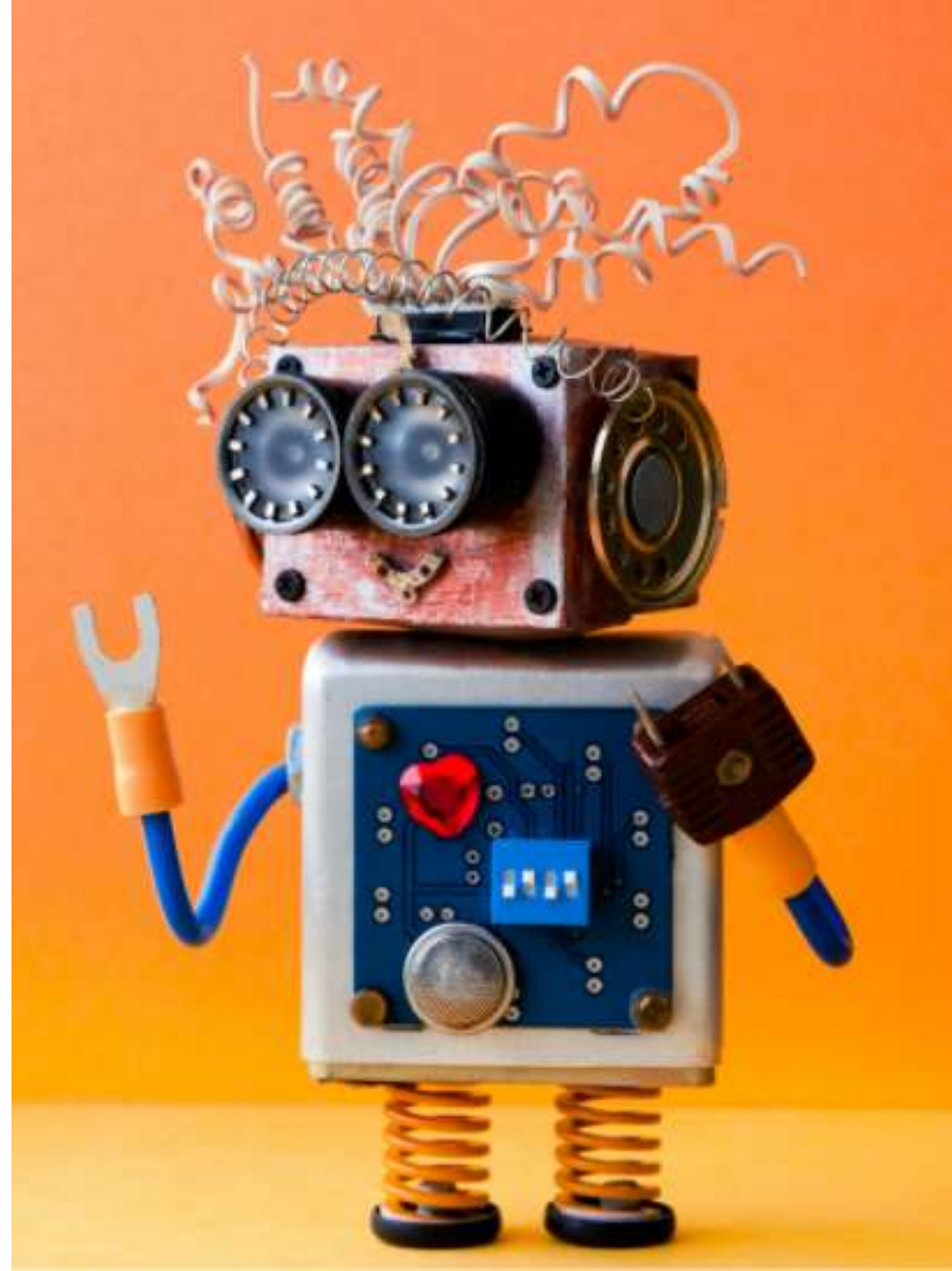


# PROJECT OVERVIEW

---



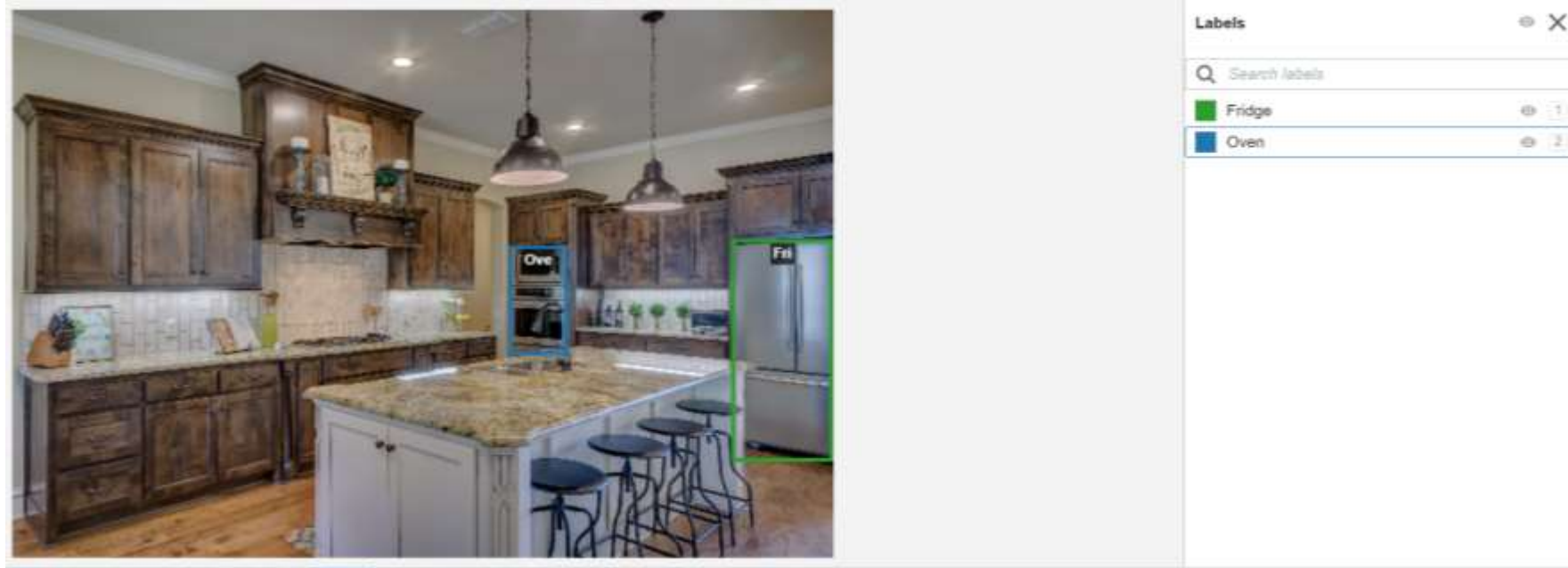
# PROJECT OVERVIEW

- In this project, we will learn how to (1) label images for object detection by drawing bounding boxes, (2) to label text data to perform sentiment analysis, and (3) perform pixel level semantic segmentation using Amazon SageMaker GroundTruth.
- These are the key learning outcomes:
  1. Learn how to define a bounding box labeling job using Amazon SageMaker Groundtruth
  2. Learn how to define a text labeling job using Amazon SageMaker Groundtruth
  3. Learn how to define semantic segmentation labeling job using Amazon SageMaker Groundtruth
  4. Perform text labeling job
  5. Draw bounding boxes and pixel-level semantics in Amazon SageMaker Groundtruth

# PROJECT OVERVIEW

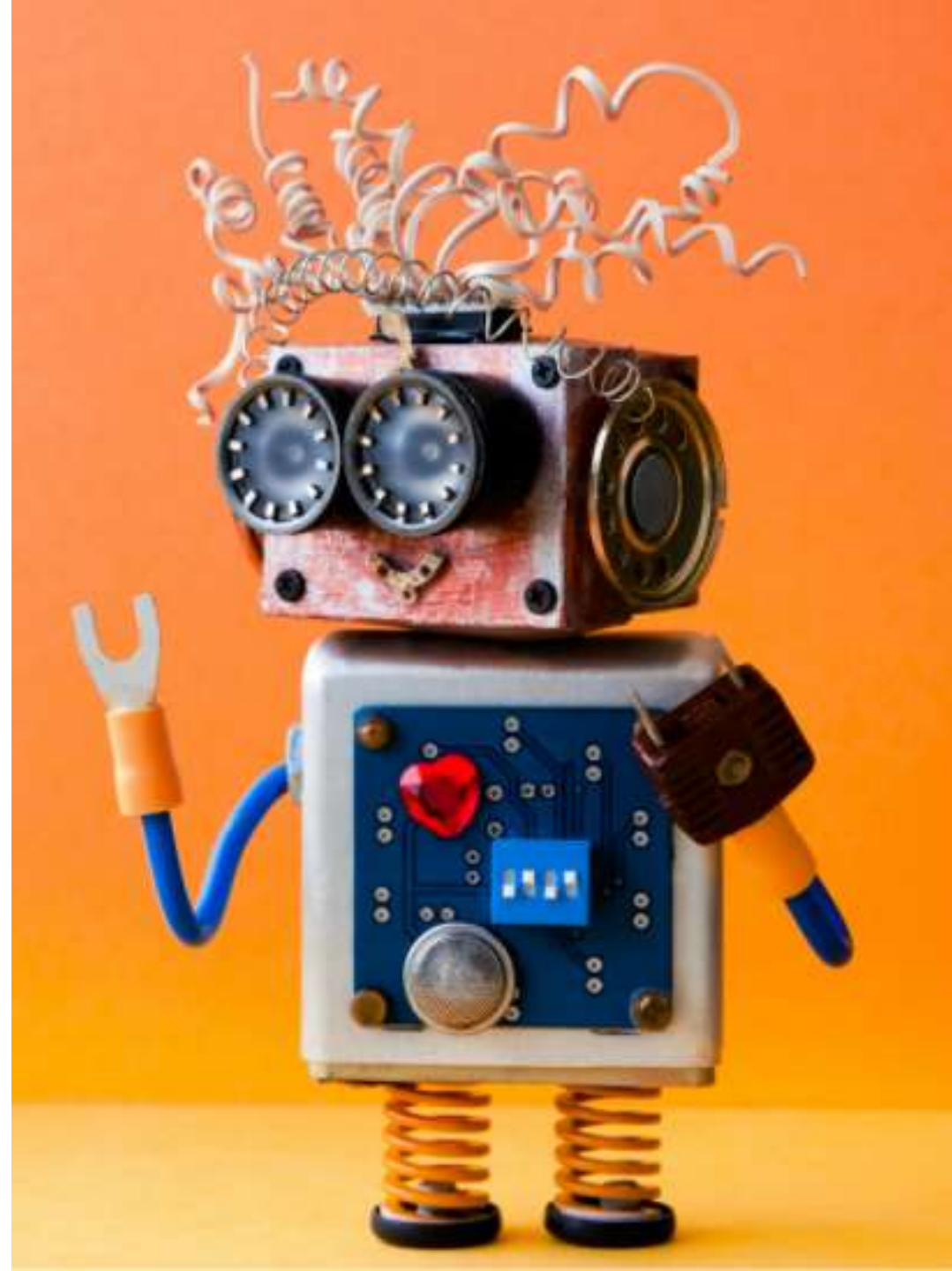
Output			
Tags			
Labeled dataset objects (10)			
Text	Label	Source	Confidence
Love my Echo?	Positive	Human annotated	0
"It's like Siri, in fact, Siri answers m...	Negative	Human annotated	0
Sound is terrible if u want good music L...	Negative	Human annotated	0
Loved it!	Positive	Human annotated	0
"Stopped working after 2 weeks ,didn't f...	Negative	Human annotated	0
"I have had a lot of fun with this thing...	Positive	Human annotated	0
I love it! Learning knew things with it ...	Positive	Human annotated	0
"I purchased this for my mother who is fi...	Positive	Human annotated	0
"Love, Love, Love!!"	Positive	Human annotated	0
"I love it, wife hates it."	Positive	Human annotated	0

# PROJECT OVERVIEW



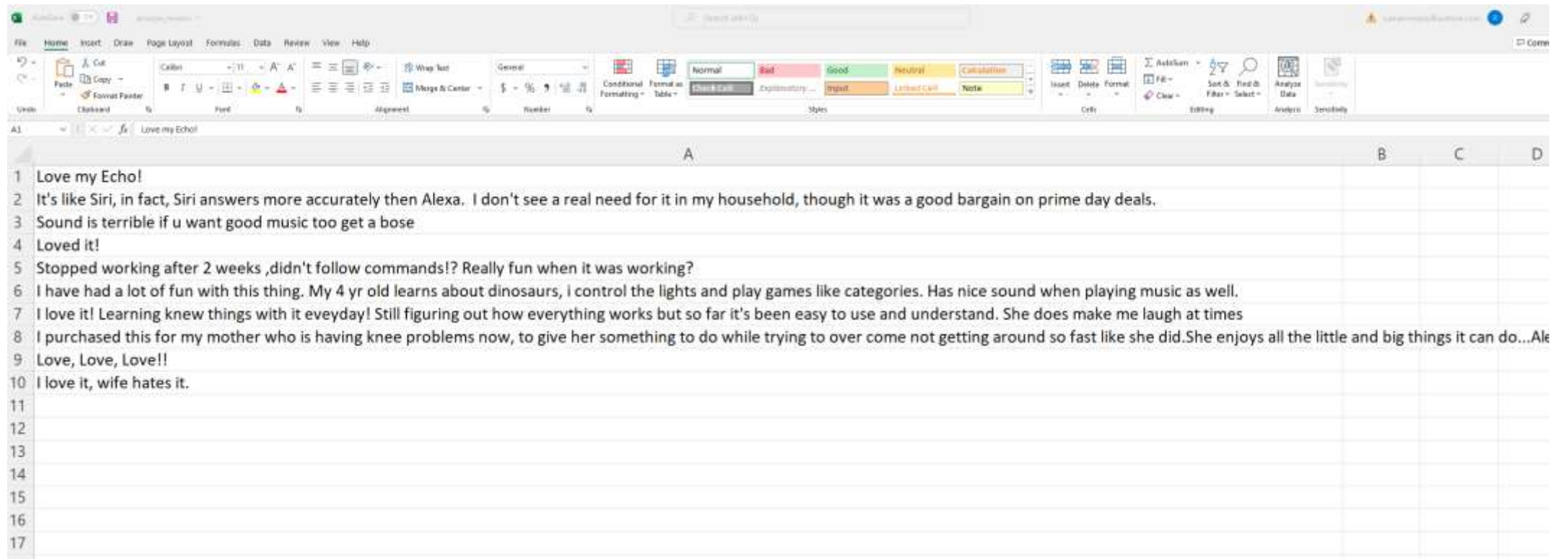
# LABELING TEXT DATASET

---



# LABELING TEXT DATASET

THE OBJECTIVE IS TO LABEL THE FOLLOWING 10 REVIEWS TO EITHER POSITIVE OR NEGATIVE





# LABELING TEXT DATASET

NAVIGATE TO SAGEMAKER GROUNDTRUTH AND CLICK ON CREATE LABELING JOB

The screenshot shows the Amazon SageMaker console interface. The top navigation bar includes the AWS logo, a search bar, and user information. The left sidebar contains navigation links for Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), and Images (Ground Truth, Notebook, Processing, Training, Inference). The main content area is titled 'Labeling jobs' and features a search bar, a 'Create labeling job' button, and a table of existing jobs.

Name	Status	Task type	Labeled objects/total	Creation time
my-third-labeling-job	Stopping	Bounding box	0 / 1	
labeling-job-project	Complete	Image Classification (Single Label)	9 / 9	

# LABELING TEXT DATASET

## UPLOAD AMAZON REVIEWS DATASET TO S3

The screenshot shows the AWS Management Console interface for uploading files to an S3 bucket. The left sidebar contains navigation options for Amazon S3, including Buckets, Access Points, and Storage Lens. The main content area is titled 'Upload' and shows the path 'Amazon S3 > Buckets > labeling-bucket > Upload'. A dashed box indicates where to drag and drop files. Below this, a table lists the files to be uploaded, showing one file named 'amazon\_reviews.csv' with a size of 1.0 KB. The 'Destination' section shows the path 's3://labeling-bucket'. At the bottom, there are sections for 'Permissions' and 'Properties', and buttons for 'Cancel' and 'Upload'.

**Amazon S3** X

**Buckets**

- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3

Block Public Access settings for this account

▼ **Storage Lens**

- Dashboards
- AWS Organizations settings

Feature spotlight 3

► AWS Marketplace for S3

Amazon S3 > Buckets > labeling-bucket > Upload

### Upload Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#) ⓘ

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

**Files and folders (1 Total, 1.0 KB)** Remove Add files Add folder

All files and folders in this table will be uploaded.

Find by name

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	amazon_reviews.csv	-	text/csv	1.0 KB

### Destination

Destination

s3://labeling-bucket

► **Destination details**

Bucket settings that impact new objects stored in the specified destination.

► **Permissions**

Grant public access and access to other AWS accounts.

► **Properties**

Specify storage class, encryption settings, tags, and more.

Cancel **Upload**



# LABELING TEXT DATASET

PROVIDE A NAME TO THE LABELING JOB, SELECT AUTOMATED DATA SETUP AND PROVIDE THE S3 PATH. CLICK ON COMPLETE DATA SETUP TO GENERATE THE INPUT MANIFEST FILE.

The screenshot shows the 'Specify job details' page in the Amazon SageMaker console. The page is divided into a left sidebar with navigation links (Dashboard, Search, SageMaker Domain, Studio, RStudio, Canvas, Images, Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace) and a main content area. The main content area has a breadcrumb trail: 'Amazon SageMaker > Labeling jobs > Create labeling job'. Below the breadcrumb, there are two steps: 'Step 1: Specify job details' (active) and 'Step 2: Select resources and configure tool'. The 'Specify job details' section is titled 'Job overview' and contains the following fields and options:

- Job name:** A text input field containing 'amazon-reviews-labeling'. Below the field, a note states: 'Maximum of 63 alphanumeric characters. Can include hyphens (-) but not spaces. Must be unique within your account in an AWS Region.'
- Label attribute name:** A checkbox labeled 'I want to specify a label attribute name different from the labeling job name.' is unchecked. Below it, a note states: 'Label attribute name is the key where your labels are stored in the augmented manifest. Ground Truth uses the labeling job name as the default label attribute name.'
- Input data setup:** Two radio buttons are present. The first, 'Automated data setup', is selected and highlighted with a blue border. Its description is: 'Provide the S3 location of the dataset you want labeled and let Ground Truth automatically connect to and use this dataset for your job.' The second, 'Manual data setup', is unselected and its description is: 'Provide the S3 location of a file (an input manifest file) that identifies the data objects you want labeled.'
- S3 location for input datasets:** A text input field contains 's3://labeling-bucket/dataset-202203251174017/manifest'. To the right of the field is a 'Browse S3' button. A note below the field states: 'This is the location in S3 where your dataset objects are stored. Ground Truth will use all data objects in this location for your labeling job.'
- S3 location for output datasets:** Two radio buttons are present. The first, 'Same location as input dataset', is selected. The second, 'Specify a new location', is unselected.
- Data type:** A dropdown menu is set to 'Text'. Below the dropdown, a note states: 'Supported formats are .txt and .csv.'
- IAM Role:** A dropdown menu is set to 'AmazonSageMaker-ExecutionRole-202203251173832'. A note above the dropdown states: 'Provide the ID or ARN for your own AWS IAM role with permission for Amazon SageMaker to access your S3 bucket. Choose a role or let us create a role with the AmazonSageMakerFullAccess IAM policy attached.'

At the bottom of the page, there is a green checkmark icon followed by the text 'Input data connection successful.' and a link 'View more details'. A 'Complete data setup' button is also visible at the bottom left of the main content area.

# LABELING TEXT DATASET

SELECT TEXT AND TEXT CLASSIFICATION THEN CLICK  
NEXT

The screenshot shows the Amazon SageMaker console interface. On the left is a navigation sidebar with sections: Amazon SageMaker, Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), and Images (Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace). The main content area is titled 'Task type' and contains the following elements:

- Task category:** A dropdown menu with 'Text' selected.
- Task selection:** A section with three options:
  - Text Classification (Single Label):** Selected with a radio button. It includes a description 'Get workers to categorize text into individual classes.' and a preview card showing a quote: "The movie tells a lovely and wise story with honesty and has been acted out with unassuming grace."
  - Text Classification (Multi-label):** Unselected. It includes a description 'Get workers to categorize text into one or more classes.' and a preview card showing a quote: "Every day is a fresh start. Always start your day with a cup of positivity."
  - Named entity recognition:** Unselected. It includes a description 'Get workers to apply labels to words or phrases within a larger text.' and a preview card showing a diagram of text with colored bars representing different entities.
- Tags - optional:** A section with a plus icon and the text 'Tags - optional'.
- Buttons:** 'Cancel' and 'Next' buttons at the bottom right.

# LABELING TEXT DATASET

## CHOOSE PRIVATE AND SELECT YOUR TEAM

aws

Services

Search for services, features, blogs, docs, and more

[Alt+S]

S3Amazon SageMaker

Amazon SageMaker

Dashboard

Search

SageMaker Domain

Studio

RStudio

Canvas

Images

► Ground Truth

► Notebook

► Processing

► Training

► Inference

► Edge Manager

► Augmented AI

► AWS Marketplace

Amazon SageMaker > Labeling jobs > Create labeling job

Step 1  
Specify job details

Step 2  
Select workers and configure tool

Workers

Info

Worker types

☐ Amazon Mechanical Turk  
An on-demand 24/7 workforce of over 500,000 independent contractors worldwide powered by Amazon Mechanical Turk.

☒ Private  
A team of workers that you have sourced yourself, including your own employees or contractors for handling data that needs to stay within your organization.

☐ Vendor managed  
A curated list of third party vendors that specialize in providing data labeling services, available via the AWS Marketplace.

Private teams

Choose from the teams you created in the private workforce or if you need to create a new team, save your progress and go to Labeling workforces to create a new one.

super-labelers

Task timeout

The maximum time a worker can work in a single task. If you want to use values beyond 8 hours, contact AWS Support.

0 hours 5 mins 0 secs

Task expiration time

The amount of time that a task remains available to workers before expiring. If you want to use values beyond 10 days, contact AWS Support.

10 days 0 hours 0 mins 0 secs

☐ Enable automated data labeling

Info

Amazon SageMaker will automatically label a portion of your dataset. It will train a model in your AWS account using Built-in Algorithm and your dataset. When you enable this, training jobs use new computing resources on your behalf. For cost information, See SageMaker pricing

► Additional configuration - optional

Workers per dataset object

Text classification labeling tool (Single Label)

Preview

Provide labeling instructions with examples below for workers. Workers will be viewing these instructions when they perform your task. Workers can choose up to 30 labels. See guidelines for See guidelines for creating high-quality instructions

# LABELING TEXT DATASET

PROVIDE GUIDANCE TO THE LABELING TEAM. CLICK  
PREVIEW TO SEE THE LABELING JOB!

The screenshot shows the Amazon SageMaker console interface for the Text classification labeling tool (Single Label). The left sidebar contains navigation links: Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), Images, and a list of services (Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace). The main content area is titled "Text classification labeling tool (Single Label)" and includes a "Preview" button. Below the title, there is a section for "Additional configuration - optional" with a dropdown for "Workers per dataset object". The central part of the interface is a text editor with a toolbar (H1, H2, B, I, A) and a text area containing the instruction "Label the following Reviews as either positive or negative (Provide Sentiment)". Below the text area, there is a list of reviews: "I love my echo > Positive" and "Terrible Product > Negative". A large vertical preview window shows a sample review "Love my Echo!" with a "Select an option" dropdown menu (Positive, Negative) and an "Add new label" button. At the bottom, there is a section for "Additional instructions - optional" and a "Create" button.

dataset. When you enable this, training jobs use new computing resources on your behalf. For cost information, see [SageMaker pricing](#).

► Additional configuration - optional  
Workers per dataset object

**Text classification labeling tool (Single Label)** [Preview](#)

Provide labeling instructions with examples below for workers. Workers will be viewing these instructions when they perform your task. Workers can choose up to 30 labels. See guidelines for [See guidelines for creating high-quality instructions](#).

**Label the following Reviews as either positive or negative (Provide Sentiment)**

I love my echo > Positive  
Terrible Product > Negative

Love my Echo!


**Select an option**  
Add up to 30 labels  
Positive  
Negative  
Add new label  
You can add 28 more labels.

► Additional instructions - optional

[Cancel](#) [Previous](#) [Create](#)

# LABELING TEXT DATASET

## VIEW OF THE LABELING JOB!



**Previewing Answers Submitted by Workers**

This message is only visible to you and will not be shown to Workers.

You can test completing the task below and click "Submit" in order to preview the data and format of the submitted results.

Instructions

Shortcuts

Label the following Reviews as either positive or negative (Provide Sentiment)

Love my Echo!


Select an option

Positive1

Negative2

# LABELING TEXT DATASET

CLICK ON INSTRUCTIONS. CLICK ON CREATE LABELING  
JOB ONCE YOU MADE SURE EVERYTHING LOOKS  
GOOD!

 **Previewing Answers Submitted by Workers** ×

This message is only visible to you and will not be shown to Workers.  
You can test completing the task below and click "Submit" in order to preview the data and format of the submitted results.

InstructionsShortcuts

Label the following Reviews as either positive or negative (Provide Sentiment)

Instructions×

I love my echo > Positive

Terrible Product > Negative

Love my Echo!

Select an option

Positive1

Negative2



# LABELING TEXT DATASET

CHECK OUT THE LABELING JOB DETAILS

Amazon SageMaker

Dashboard

Search

SageMaker Domains

- Studio
- RSStudio
- Carvot

Inspire

- Ground Truth
- Notebook
- Processing
- Training
- Inference
- Edge Manager
- Augmented AI
- AWS Marketplace

Amazon SageMaker

Labeling jobs

amazon-reviews-labeling

amazon-reviews-labeling

Actions

View labeling tool

Labeling job summary

Status

- In progress

Task type

- Text Classification (Single Label)

Creation time

Input dataset location

- s3://labeling-bucket/dataset-3022814257114017/movies

Output dataset location

- s3://labeling-bucket/amazon-reviews-labeling

ARN

- arn:aws:sagemaker-us-east-1:971421653261:labeling-jobs/amazon-reviews-labeling

Worker type

- Private

Workspace ARN

- arn:aws:sagemaker-us-east-1:971421653261:workspace/private-owned/super-sabotage

Output

Tags

Labelled dataset objects

Query output

Text	Label	Score	Confidence	Label creation time
Love my Echo...	+	+	+	+
"It's like Siri, in fact, Siri answers it..."	+	+	+	+
Sound is terrible if u want good music t...	+	+	+	+
Loved it...	+	+	+	+
"Stopped working after 2 weeks, don't t...	+	+	+	+
"I have had a lot of fun with this thing..."	+	+	+	+
I love it! Learning new things with it...	+	+	+	+
"I purchased this for my mother who is 80..."	+	+	+	+
"Love, Love, Love!"	+	+	+	+
"I love it, with states it..."	+	+	+	+

# LABELING TEXT DATASET

## NAVIGATE TO LABELING WORKFORCE AND INVITE TEAM MEMBERS

The screenshot displays the Amazon SageMaker console interface for managing a private labeling workforce. The left sidebar contains navigation links for Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), and Images (Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace). The main content area is titled 'Labeling workforces' and includes tabs for Amazon Mechanical Turk, Private (selected), and Vendor.

**Private workforce summary**

Your workforce is governed by an Amazon Cognito user pool. With a user pool, your workers can sign in to the labeling portal through Amazon Cognito.

Amazon Cognito user pool: [us-east-1\\_ODWaqiQOI](#)

App client: [4j2jddv8l7ecm4qk58k360c05h](#)

Labeling portal sign-in URL: <https://fuiw9Bwi.labeling.us-east-1.sagemaker.aws>

**Private teams** (1)

A base of workers from your private workforce. Only one team can work on a labeling job or review task (jobs). Each team can be assigned to multiple jobs.

Search private teams by name

Name	ARN	Creation time
<a href="#">super-labelers</a>	arn:aws:sagemaker:us-east-1:971421653261:workteam/private-crowd/super-labelers	

**Workers**

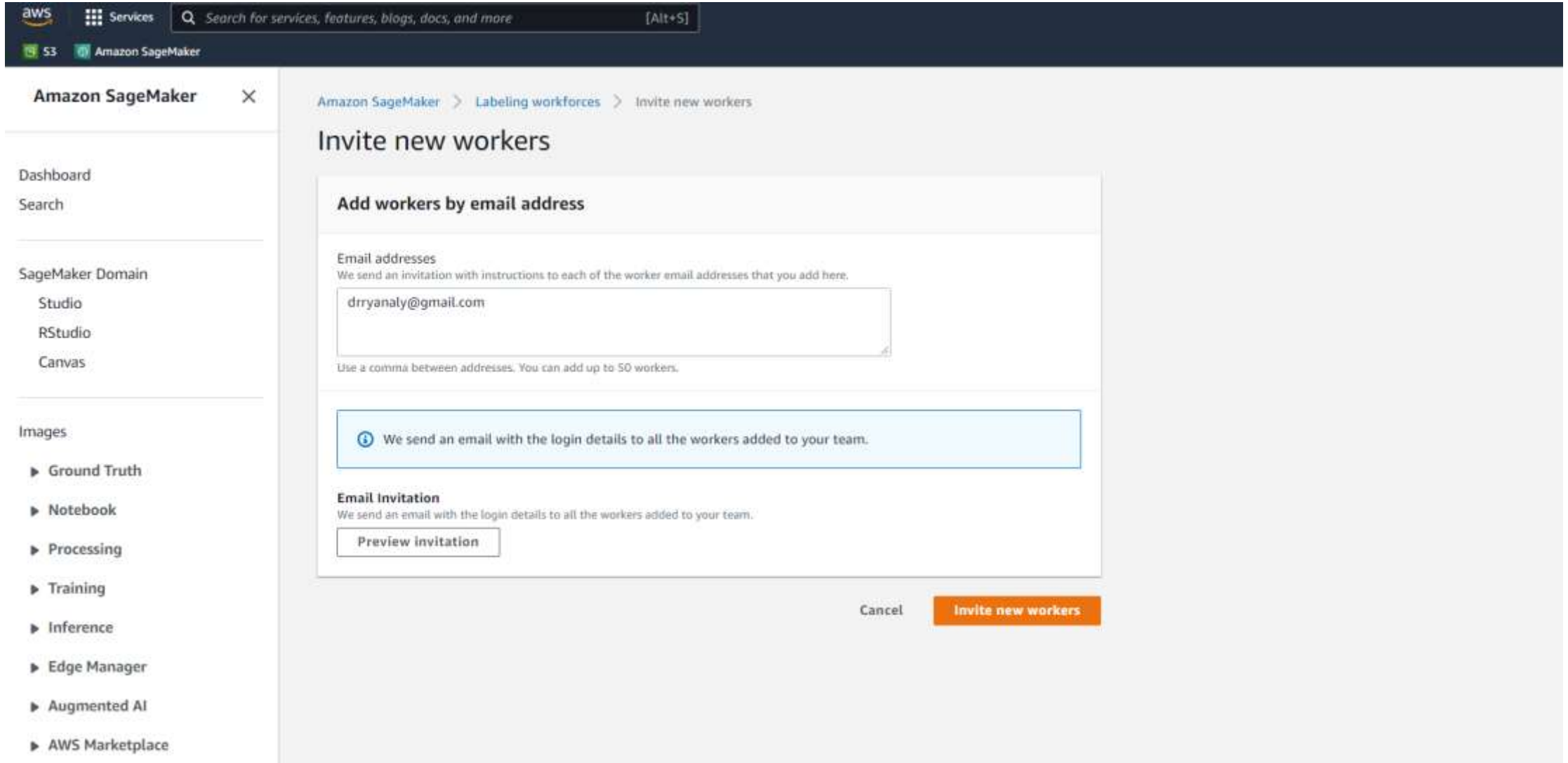
All workers in your private workforce.

Search workers by email

Email	Status	Cognito status	Enabled	Username
<a href="#">ryanahmedaty@gmail.com</a>	Verified	Confirmed	Yes	ryanahmedaty@gmail.com

# LABELING TEXT DATASET

ENTER THE EMAIL OF THE WORKER AND CLICK ON  
INVITE NEW WORKER



aws Services Search for services, features, blogs, docs, and more [Alt+S]

S3 Amazon SageMaker

Amazon SageMaker X

Dashboard  
Search

SageMaker Domain

- Studio
- RStudio
- Canvas

Images

- ▶ Ground Truth
- ▶ Notebook
- ▶ Processing
- ▶ Training
- ▶ Inference
- ▶ Edge Manager
- ▶ Augmented AI
- ▶ AWS Marketplace

Amazon SageMaker > Labeling workforces > Invite new workers

## Invite new workers

### Add workers by email address

Email addresses  
We send an invitation with instructions to each of the worker email addresses that you add here.

drryanaly@gmail.com

Use a comma between addresses. You can add up to 50 workers.

*i* We send an email with the login details to all the workers added to your team.

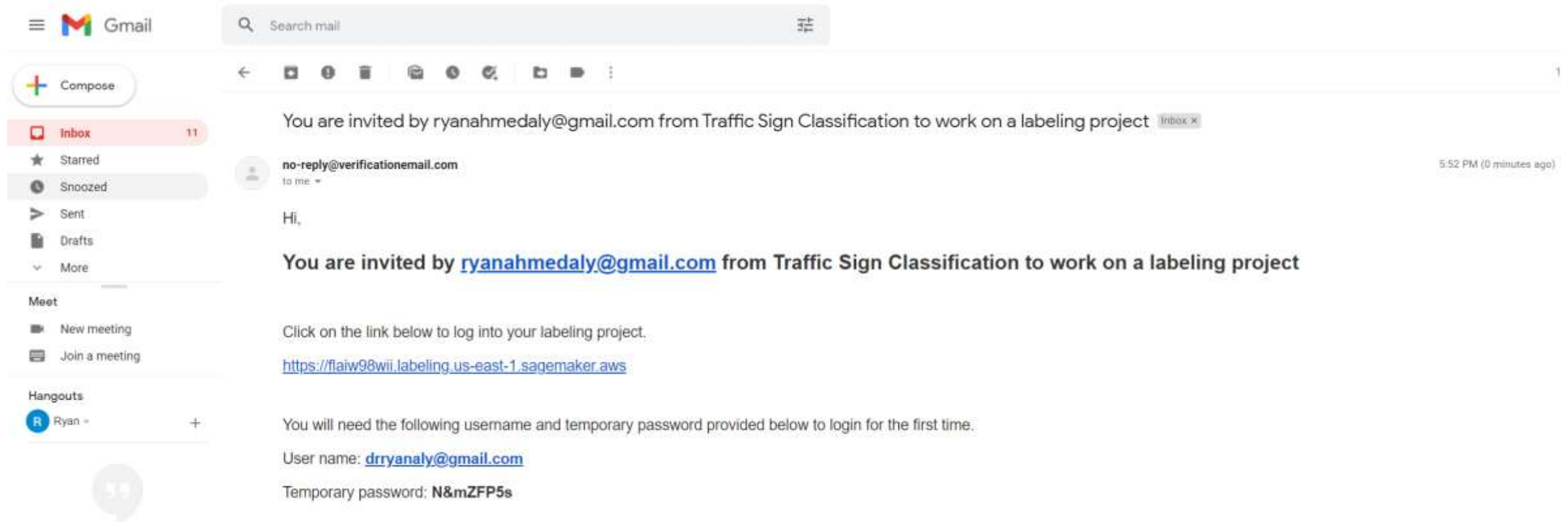
Email Invitation  
We send an email with the login details to all the workers added to your team.

Preview invitation

Cancel Invite new workers

# LABELING TEXT DATASET

YOU WILL RECEIVE THE FOLLOWING EMAIL, LOGIN WITH  
THE PROVIDED USERNAME AND PASSWORD



# LABELING TEXT DATASET

START LABELING! HAVE FUN! THIS REVIEW IS POSITIVE

Hello, ryanahmedaly@gmail.com

Customer ID: ...

Task description: Categori...

Task time: 0:37 of 5 Min

Decline task

Release task

Stop and resume later

Instructions

Shortcuts

Label the following Reviews as either positive or negative (Provide Sentiment)

©

Love my Echo!

Select an option

Positive1

Negative2

Submit

# LABELING TEXT DATASET

THIS REVIEW IS NEGATIVE

Hello, ryanahmedaly@gmail.com

Customer ID: ...

Task description: Categori...

Task time: 0:08 of 5 Min

Decline task

Release task

Stop and resume later

Instructions

Shortcuts

Label the following Reviews as either positive or negative (Provide Sentiment)

Sound is terrible if u want good music too get a bose

Select an option

Positive1

Negative2

Submit



# LABELING TEXT DATASET

## REVIEW THE OUTPUT MANIFEST FILE

```
output (2).manifest - Notepad
File Edit View

["source":"Love my Schol!", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:54:40.483314"}}]
["source":"'It's like 5/10, in fact, 5/10 answers were accurately then also. I don't see a real need for it in my household, though it was a good bargain on price for deals.'", "amazon-reviews-labeling":1, "amazon-reviews-labeling-metadata":{"class-name":"Negative", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"Sound is terrible if u want good music too get a Bose", "amazon-reviews-labeling":1, "amazon-reviews-labeling-metadata":{"class-name":"Negative", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"Loved it!", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'Stopped working after 2 weeks ,didn't follow commands!?! Really fun when it was working!'", "amazon-reviews-labeling":1, "amazon-reviews-labeling-metadata":{"class-name":"Negative", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'I have had a lot of fun with this thing. My 4 yr old learns about dinosaurs, i control the lights and play games like categories. Was nice sound when playing music as well.'", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'I love it! Learning new things with it everyday! Still figuring out how everything works but so far it's been easy to use and understand. She does make me laugh at times.", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'I purchased this for my mother who is having knee problems now, to give her something to do while trying to do while trying to over come not getting around so fast like she did. She enjoys all the little and big things it can do... She plays this song, what time is it and where, and how to cook this and that!'", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'Love, love, love!!!", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:55:55.164515"}}]
["source":"'I love it, wife hates it.'", "amazon-reviews-labeling":0, "amazon-reviews-labeling-metadata":{"class-name":"Positive", "job-name":"labeling-job/amazon-reviews-labeling", "confidence":0, "type":"groundtruth/text-classification", "human-annotated":"yes", "creation-date":"2022-03-25T21:54:40.483314"}}]
```

# LABELING TEXT DATASET

## CHECK THE STATUS OF THE LABELING JOB

Amazon SageMaker

Dashboard

Search

SageMaker Domain

Studio

RStudio

Canvas

Images

► Ground Truth

► Notebook

► Processing

► Training

► Inference

► Edge Manager

► Augmented AI

► AWS Marketplace

Amazon SageMaker

Labeling jobs

amazon-reviews-labeling

amazon-reviews-labeling

Labeling job summary

Status

Complete

Task type

Text Classification (Single Label)

Creation time

Input dataset location

s3://labeling-bucket/dataset-20220325T174017.manifest

Output dataset location

s3://labeling-bucket/amazon-reviews-labeling/

Labeled / total dataset objects

10 / 10

ARN

arn:aws:sagemaker:us-east-1:971421653261:labeling-job/amazon-reviews-labeling

Worker type

Private

Workteam ARN

arn:aws:sagemaker:us-east-1:971421653261:workteam/private-crowd/super-labelers

Output

Tags

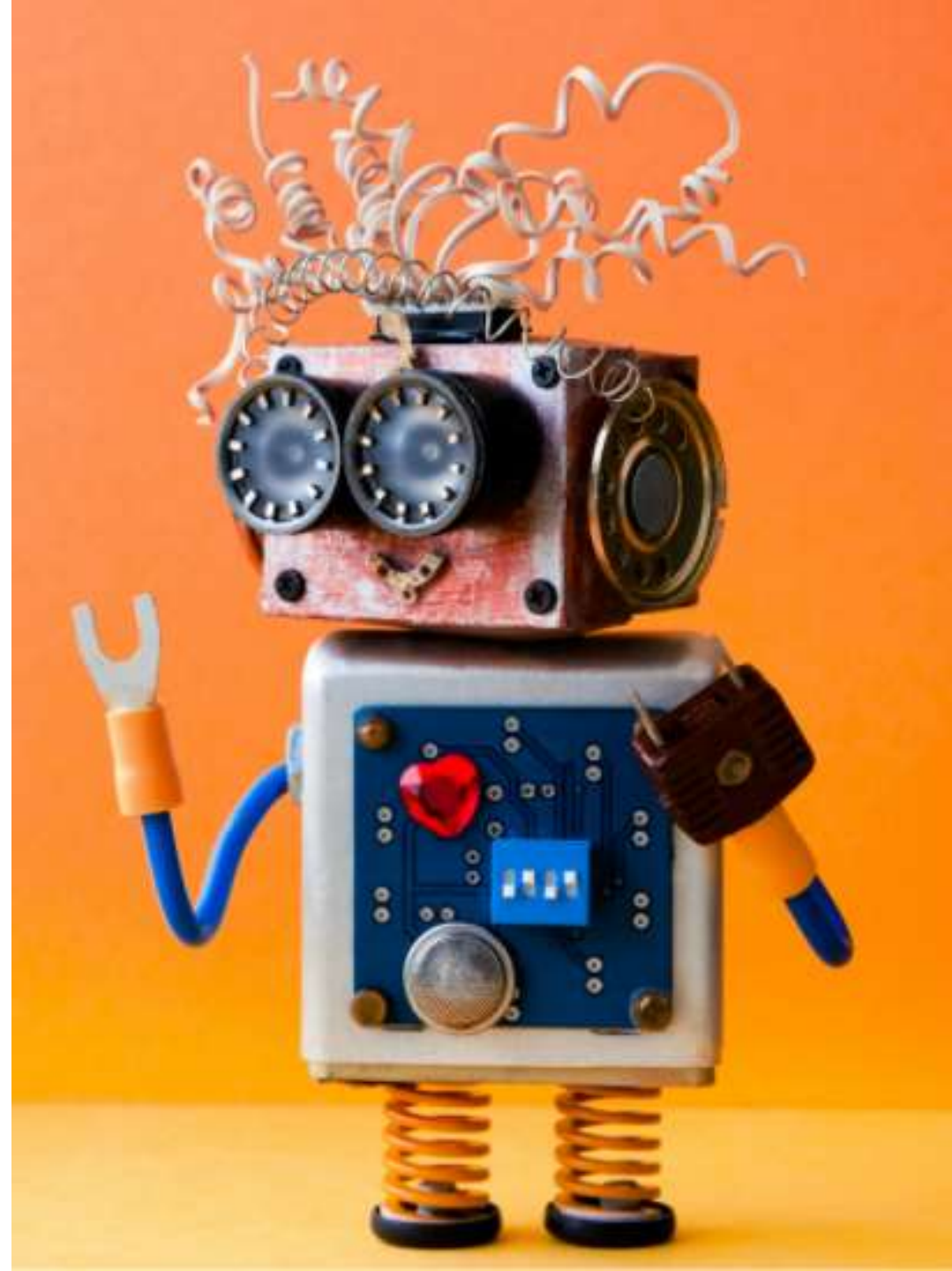
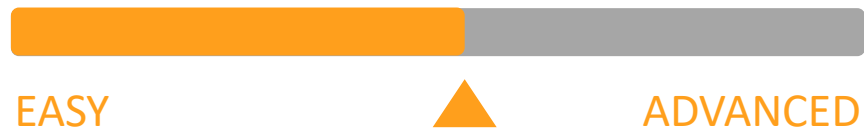
Labeled dataset objects (10)

Query output

Text	Label	Source	Confidence	Label creation time
Love my Echo!	Positive	Human annotated	0	
"It's like Siri, in fact, Siri answers m...	Negative	Human annotated	0	
Sound is terrible if u want good music t...	Negative	Human annotated	0	
Loved it!	Positive	Human annotated	0	
"Stopped working after 2 weeks ,didn't f...	Negative	Human annotated	0	
"I have had a lot of fun with this thing...	Positive	Human annotated	0	
I love it! Learning knew things with it ...	Positive	Human annotated	0	
"I purchased this for my mother who is h...	Positive	Human annotated	0	
"Love, Love, Love!"	Positive	Human annotated	0	
"I love it, wife hates it."	Positive	Human annotated	0	

# LABELING IMAGES: SEMANTIC SEGMENTATION

---



# LABELING IMAGES: SEMANTIC SEGMENTATION

## LET'S CREATE A SEMANTIC SEGMENTATION JOB

AWS

Services

Search for services, features, blogs, docs, and more

[Alt+S]

S3

Amazon SageMaker

Amazon SageMaker

X

Dashboard

Search

SageMaker Domain

Studio

RStudio

Canvas

Images

▶ Ground Truth

▶ Notebook

▶ Processing

▶ Training

▶ Inference

▶ Edge Manager

▶ Augmented AI

▶ AWS Marketplace

Amazon SageMaker > Labeling jobs > Create labeling job

Step 1

Specify job details

Step 2

Select workers and configure tool

Specify job details

Job overview

Job name

semantic-labeling-job

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in an AWS Region.

☐ I want to specify a label attribute name different from the labeling job name.

Label attribute name is the key where your labels are stored in the augmented manifest. Ground Truth uses the labeling job name as the default label attribute name.

Input data setup [Info](#)

Use the automated setup to have Ground Truth automatically identify your dataset in S3. Use the manual setup if you have an input manifest file.

☒ Automated data setup

Provide the S3 location of the dataset you want labeled and let Ground Truth automatically connect to and use this dataset for your job.

☐ Manual data setup

Provide the S3 location of a file (an input manifest file) that identifies the data objects you want labeled.

Data setup

S3 location for input datasets [Info](#)

This is the location in S3 where your dataset objects are stored. Ground Truth will use all data objects in this location for your labeling job.

S3://my-labeling-images/dataset-20220325T191961.manife X

Browse S3

S3 location for output datasets [Info](#)

This is the location in S3 where your labeling job output data is stored.

☒ Same location as input dataset

☐ Specify a new location

Data type

Image

Supported formats are .jpg, .jpeg, and .png

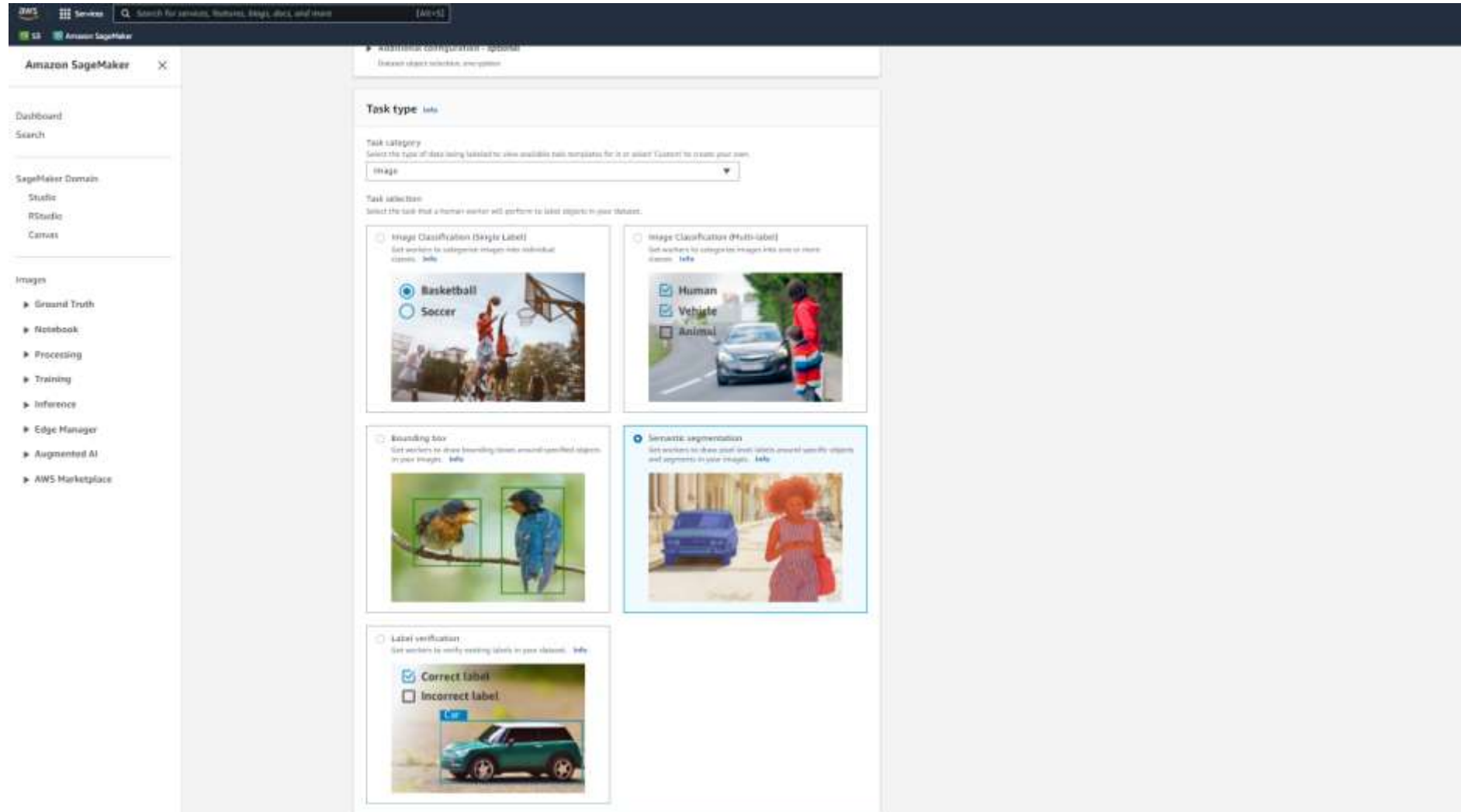
IAM Role [Info](#)

Provide the ID or ARN for your own AWS KMS encryption key for Amazon SageMaker to access your S3 bucket. Choose a role or let us create a role with the [AmazonSageMakerFullAccess](#) IAM policy attached.

AmazonSageMaker-ExecutionRole-20220325T191902

# LABELING IMAGES: SEMANTIC SEGMENTATION

BOUNDING BOXES LABELING JOB IS NOW COMPLETE



# LABELING IMAGES: SEMANTIC SEGMENTATION

## CHOOSE THE TEAM

The screenshot shows the Amazon SageMaker console interface. The top navigation bar includes the AWS logo, 'Services', a search bar, and a keyboard shortcut '[Alt+S]'. The left sidebar contains the 'Amazon SageMaker' logo and a navigation menu with categories: 'Dashboard', 'Search', 'SageMaker Domain' (with sub-items Studio, RStudio, Canvas), 'Images' (with sub-items Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, and AWS Marketplace), and 'Additional configuration - optional'.

The main content area is titled 'Select workers and configure tool' and is part of a 'Create labeling job' workflow. It shows 'Step 1: Select workers and configure tool'. The 'Workers' section is active, displaying three worker types: 'Amazon Mechanical Turk' (an on-demand 24/7 workforce of over 500,000 independent contractors), 'Private' (selected, described as a team of workers sourced by the user), and 'Vendor managed' (a curated list of third-party vendors). Below this, the 'Private teams' section allows selecting a team from a dropdown menu, currently showing 'super-labelers'. The 'Task timeout' section has input fields for 1 hour, 0 minutes, and 0 seconds. The 'Task expiration time' section has input fields for 10 days, 0 hours, 0 minutes, and 0 seconds. There is an unchecked checkbox for 'Enable automated data labeling' with an 'info' link. At the bottom, there is an 'Additional configuration - optional' section with a link to 'Workers per dataset object'.



# LABELING IMAGES: SEMANTIC SEGMENTATION

PROVIDE INSTRUCTIONS!

The screenshot shows the Amazon SageMaker Semantic Segmentation Labeling Tool interface. The left sidebar contains navigation links for Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), and Images (Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace). The main panel is titled "Semantic segmentation labeling tool" and includes a "Preview" button. Below the title, there is a text area for instructions: "Perform Pixel level semantic segmentation on ovens and Fridges". To the left of the image, there are two examples: a "Good example" with a description and an "Add image here" button, and a "Bad example" with a description and an "Add image here" button. The central image shows a kitchen scene. To the right of the image, there is a "Labels" section with a list of labels: "oven" and "Fridge", each with a close button. Below the labels, there is an "Add new label" button and a note: "You can add 5 more labels". At the bottom of the panel, there is a section for "Additional instructions - optional" and buttons for "Cancel", "Previous", and "Create".

Amazon SageMaker

Semantic segmentation labeling tool

Provide labeling instructions with examples below for workers. Workers will be viewing these instructions when they perform your task. Workers can choose up to 10 labels. See guidelines for [See guidelines for creating high-quality instructions](#)

Perform Pixel level semantic segmentation on ovens and Fridges

**Good example**  
Enter description to explain a correctly done segmentation  
Add image here

**Bad example**  
Enter description of an incorrectly done segmentation  
Add image here

**Labels**  
Add up to 10 labels  
oven  
Fridge  
Add new label  
You can add 5 more labels

Additional instructions - optional

Cancel Previous Create

# LABELING IMAGES: SEMANTIC SEGMENTATION

SELECT FRIDGE AND OVEN FROM THE IMAGES

aws Services Search for services, features, blogs, docs, and more [Alt+S]

S3 Amazon SageMaker

Amazon SageMaker X

Dashboard  
Search


SageMaker Domain  
Studio  
RStudio  
Canvas

Images  
▶ Ground Truth  
▶ Notebook  
▶ Processing  
▶ Training  
▶ Inference

Amazon SageMaker > Labeling jobs > semantic-segmentation-labeling > kitchen 2.jpg

## kitchen 2.jpg

**Dataset object summary**



Source  
<s3://my-labeling-images/kitchen 2.jpg>


# LABELING IMAGES: SEMANTIC SEGMENTATION

LABELING JOB IS COMPLETE


**Output** | Tags

Labeled dataset objects (3) Query output


< 1 ... > ⚙



kitchen 1.jpg



kitchen 2.jpg



kitchen 3.jpg

# LABELING IMAGES: SEMANTIC SEGMENTATION

THE OUTPUT IS THE MANIFEST FILE ALONG WITH AN IMAGE CONTAINING PIXEL LEVEL SEGMENTATION (WITH COLOR CODE THAT INDICATES THE CLASS)

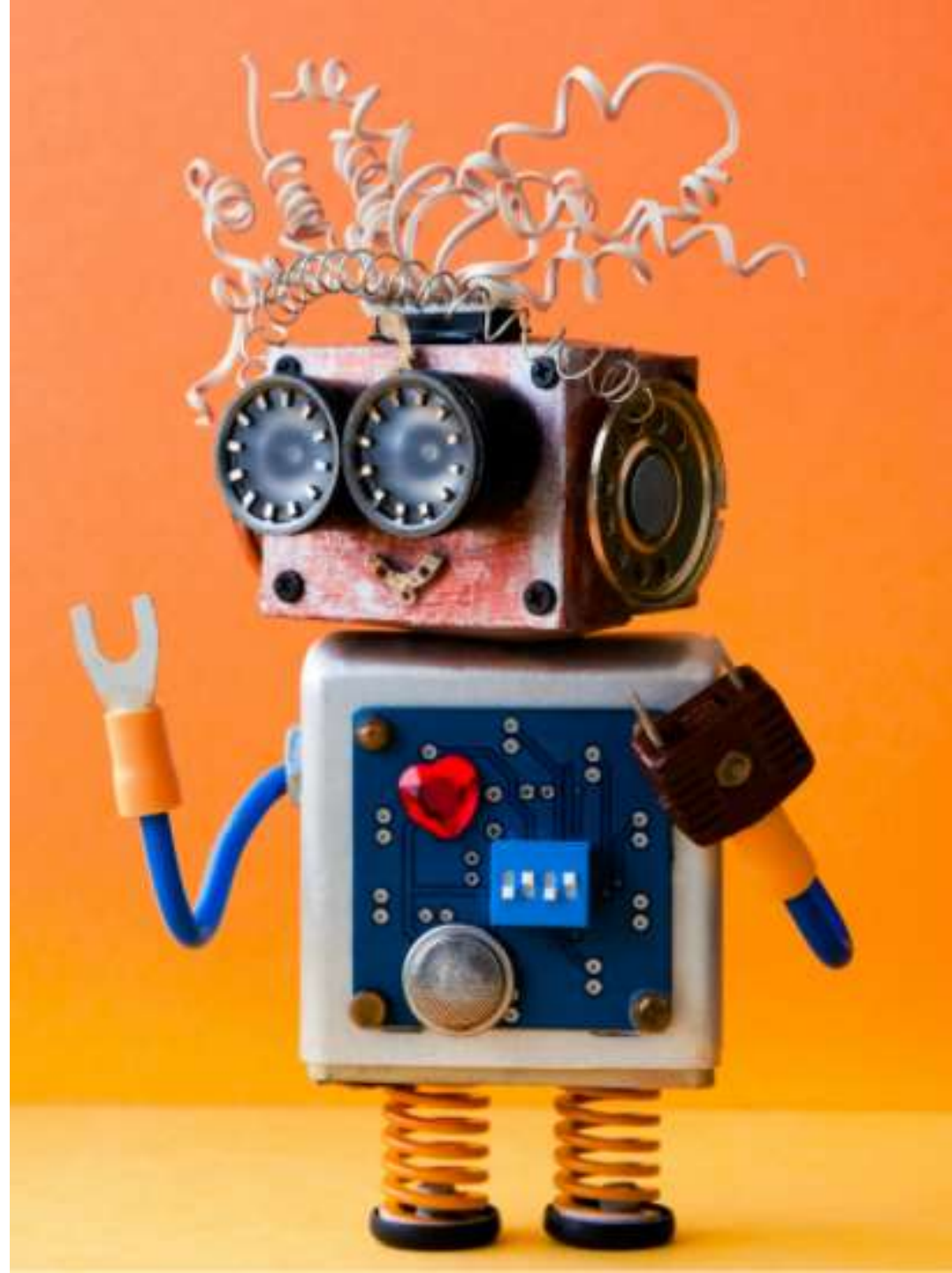


```
output (5).manifest - Notepad
File Edit View

{"source-ref":"s3://my-labeling-images/kitchen 1.jpg","semantic-segmentation-labeling-ref":"s3://my-labeling-images/semantic-segmentation-labeling/annotations/consolidated-annotation/output/0_2022-03-25T23:29:49.844419.png","semantic-segmentation-labeling-ref-metadata":{"internal-color-map":{"0":{"class-name":"BACKGROUND","hex-color":"#ffffff","confidence":0},"1":{"class-name":"oven","hex-color":"#2ca02c","confidence":0},"2":{"class-name":"Fridge","hex-color":"#1f77b4","confidence":0}},"type":"groundtruth/semantic-segmentation","human-annotated":"yes","creation-date":,"job-name":"labeling-job/semantic-segmentation-labeling"}}
{"source-ref":"s3://my-labeling-images/kitchen 2.jpg","semantic-segmentation-labeling-ref":"s3://my-labeling-images/semantic-segmentation-labeling/annotations/consolidated-annotation/output/1_2022-03-25T23:32:45.839361.png","semantic-segmentation-labeling-ref-metadata":{"internal-color-map":{"0":{"class-name":"BACKGROUND","hex-color":"#ffffff","confidence":0},"1":{"class-name":"oven","hex-color":"#2ca02c","confidence":0},"2":{"class-name":"Fridge","hex-color":"#1f77b4","confidence":0}},"type":"groundtruth/semantic-segmentation","human-annotated":"yes","creation-date":,"job-name":"labeling-job/semantic-segmentation-labeling"}}
{"source-ref":"s3://my-labeling-images/kitchen 3.jpg","semantic-segmentation-labeling-ref":"s3://my-labeling-images/semantic-segmentation-labeling/annotations/consolidated-annotation/output/2_2022-03-25T23:32:46.289645.png","semantic-segmentation-labeling-ref-metadata":{"internal-color-map":{"0":{"class-name":"BACKGROUND","hex-color":"#ffffff","confidence":0},"1":{"class-name":"oven","hex-color":"#2ca02c","confidence":0},"2":{"class-name":"Fridge","hex-color":"#1f77b4","confidence":0}},"type":"groundtruth/semantic-segmentation","human-annotated":"yes","creation-date":,"job-name":"labeling-job/semantic-segmentation-labeling"}}
```

# GROUNDTRUTH PRICING

---



# PRICING OF SAGEMAKER GROUNDTRUTH

- AWS Free Tier: For first two month, 500 objects labeled per month are free.
- Customers pay for each labeled object (image, audio, text) whether it's labeled automatically by SageMaker Ground Truth (autolabeling) or by humans.
- If Mechanical Turks or third-party vendors are used, an additional cost is added per labeled object.
- If customers leverage their own internal employees, no additional cost per labeled object is required.

## REVIEWED OBJECTS (IMAGES, VIDEO FRAMES, TEXT, AUDIO FILES, ETC.)

NUMBER OF REVIEWED OBJECTS PER MONTH	PRICE PER REVIEWED OBJECT
Less than 50,000 objects	\$0.08
50,000 to 1,000,000 objects	\$0.04
Greater than 1,000,000 objects	\$0.02



# PRICING OF SAGEMAKER GROUNDTRUTH

- If Amazon Mechanical Turks are used for labeling, there is an additional charge per object per review instance.
- Multiple labelers per object are recommended to enhance the accuracy of the labels.

WORKFLOW	SUGGESTED PRICE PER LABELER
Image classification	\$0.012
Text classification	\$0.012
Named Entity Recognition (NER)	\$0.024
Bounding box	\$0.036
Semantic Segmentation	\$0.84

# PRICING OF SAGEMAKER GROUNDTRUTH: EXAMPLE #1

## QUESTION

- Let's assume we have a company that is leveraging its own internal employees to label images.
- The total number of images they labeled is 40,000 images.
- The company uses Amazon SageMaker Groundtruth to manage the labeling process.
- Calculate the estimated cost of the labeling process.

## SOLUTION

- Since the company used its own workforce and since the number of images is below 50,000. Then the cost of each image is \$0.08.
- Total Cost = 40,000 human-labeled images x \$0.08 per image = \$3,200

AWS SageMaker Pricing Examples: [https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps\\_a134p0000078pqxaae&trkcampaign=acq\\_paid\\_search\\_brand](https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps_a134p0000078pqxaae&trkcampaign=acq_paid_search_brand)

# PRICING OF SAGEMAKER GROUNDTRUTH: EXAMPLE #2

## QUESTION

- A company want to label 85,000 posts (text data) using Amazon SageMaker GroundTruth.
- The company set a custom workflow and set a payment of \$0.036 per post.
- The company decided to label each post three times to improve the accuracy.
- Because the company used Mechanical Turk, the cost includes an additional charge of \$0.036 for each human-labeled post to pay the labeler.

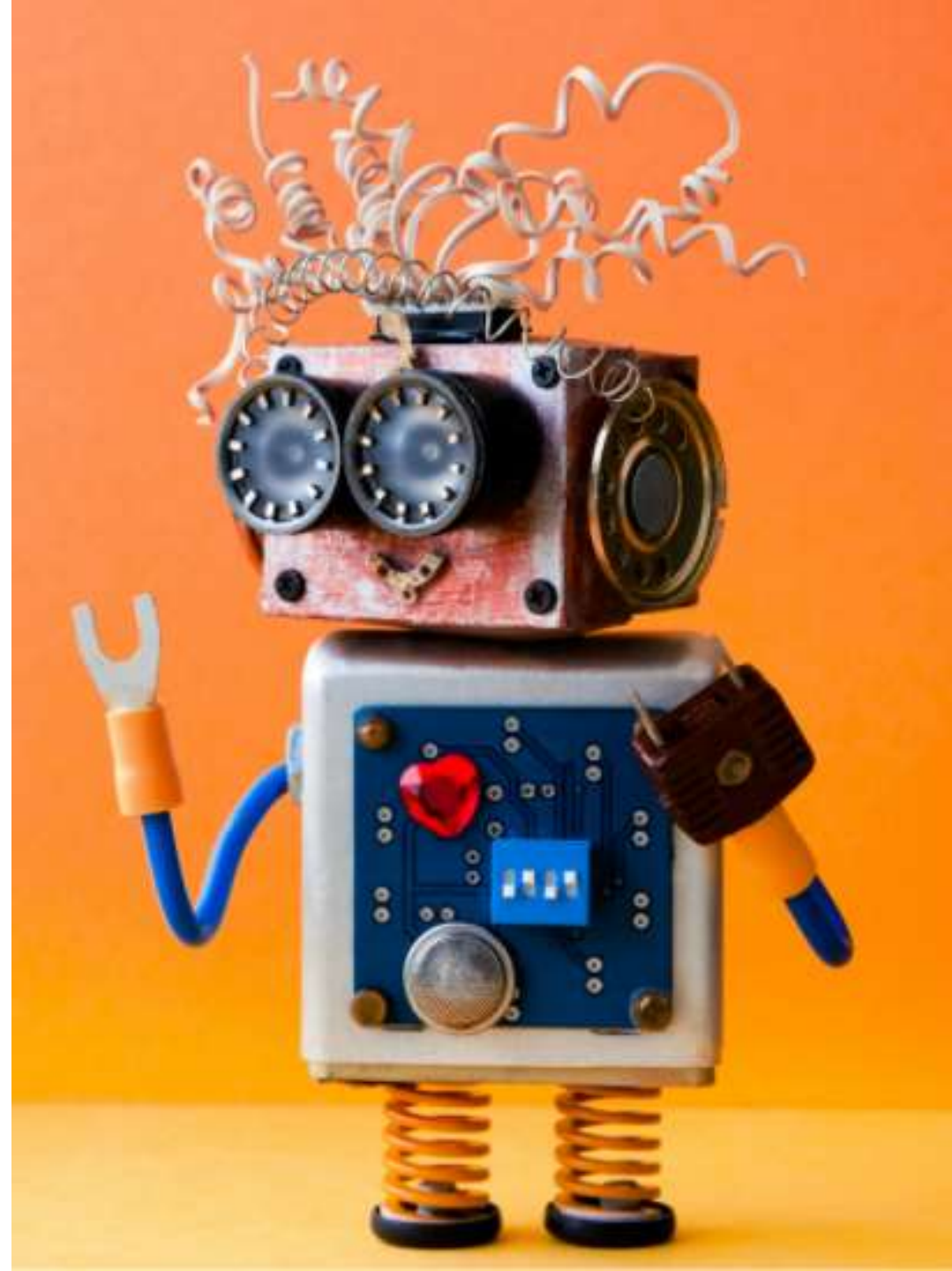
## SOLUTION

- Note that the first
- Total Cost = (50,000 x \$0.08 per article) + (35,000 posts x \$0.04 per post) + (85,000 human-labeled posts x \$0.036 per post x 3 labelers per object) = \$14,580

AWS SageMaker Pricing Examples: [https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps\\_a134p0000078pqxaae&trkcampaign=acq\\_paid\\_search\\_brand](https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps_a134p0000078pqxaae&trkcampaign=acq_paid_search_brand)

# GROUNDTRUTH PRICING PRACTICE OPPORTUNITY

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# PRACTICE OPPORTUNITY

## QUESTION

- A publishing company wants to natural language processing application to classify newspaper articles. To do this, they want to label 200,000 articles.
- Each article need to be labeled three times.
- Using SageMaker Ground Truth, humans label 40,000 articles and 160,000 are labeled automatically.
- Because the company used Mechanical Turk, the text classification workflow included an additional charge of \$0.012 for each human-labeled article to pay the labeler.

AWS SageMaker Pricing Examples: [https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps\\_a134p0000078pqxaae&trkcampaign=acq\\_paid\\_search\\_brand](https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps_a134p0000078pqxaae&trkcampaign=acq_paid_search_brand)

# PRACTICE OPPORTUNITY

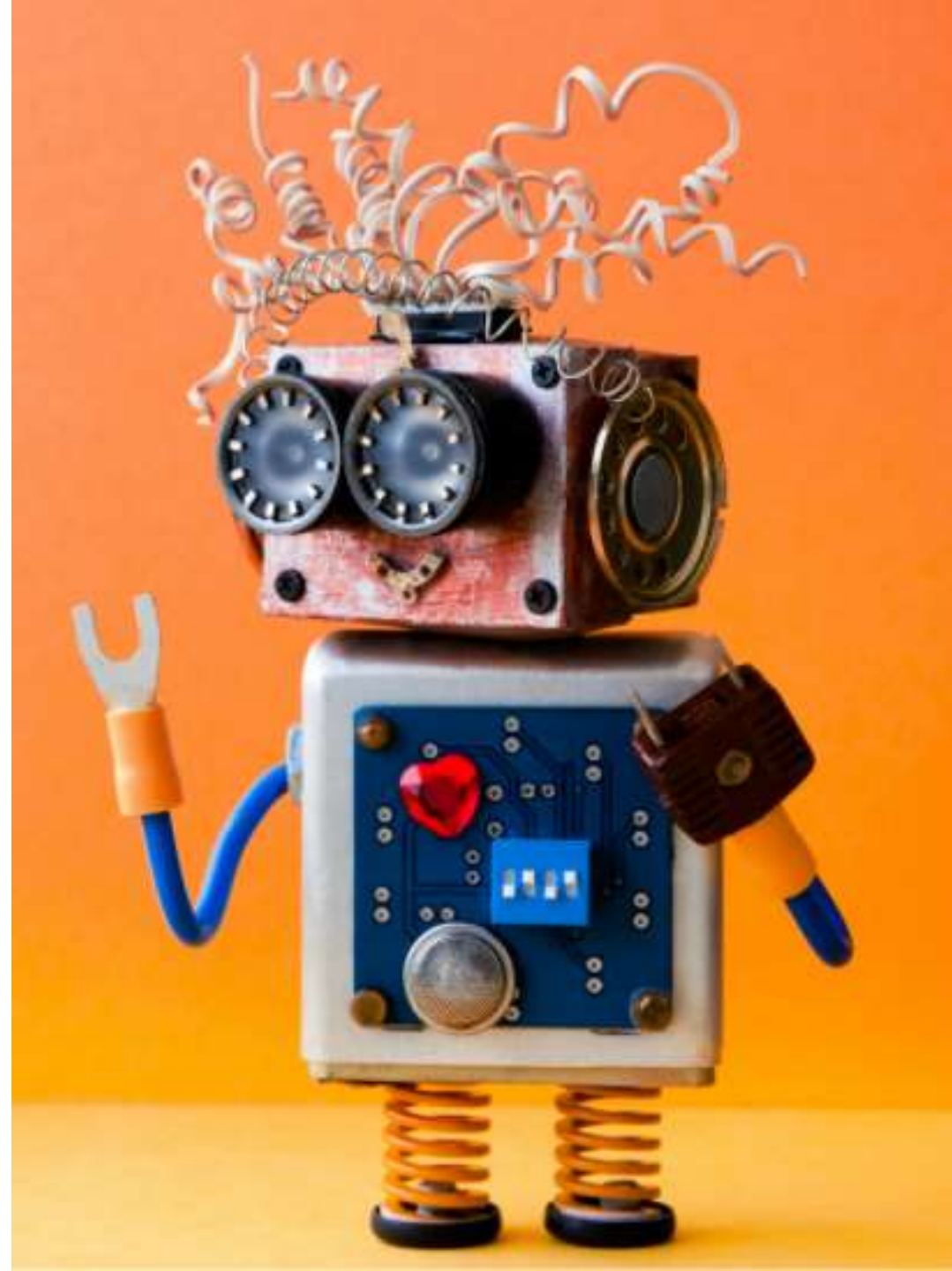
## SOLUTION

- Total Cost = (50,000 x \$0.08 per article) + (150,000 articles x \$0.04 per article) + (40,000 human-labeled articles x \$0.012 per article x 3 labelers per object) + Amazon SageMaker training & inference costs\*\* = \$11,440 + Amazon SageMaker training & inference costs\*\*
- \*\*These costs depend on a variety of factors, including the type of dataset being used, the type of labeling task, and the resolution of the images in your dataset.

AWS SageMaker Pricing Examples: [https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps\\_a134p0000078pqxaae&trkcampaign=acq\\_paid\\_search\\_brand](https://aws.amazon.com/sagemaker/data-labeling/pricing/?nc=sn&loc=3&refid=ps_a134p0000078pqxaae&trkcampaign=acq_paid_search_brand)

# FINAL END-OF-DAY CAPSTONE PROJECT

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# PROJECT

1. Using the 3 kitchen images included in the course package.
2. Create a bounding box labeling job using Amazon SageMaker GroundTruth to label only the “fridge” and “oven”.
3. Review the input manifest file.
4. Perform the labeling job.
5. Review the output manifest file and ensure that the labeling job was successful.



kitchen 1



kitchen 2

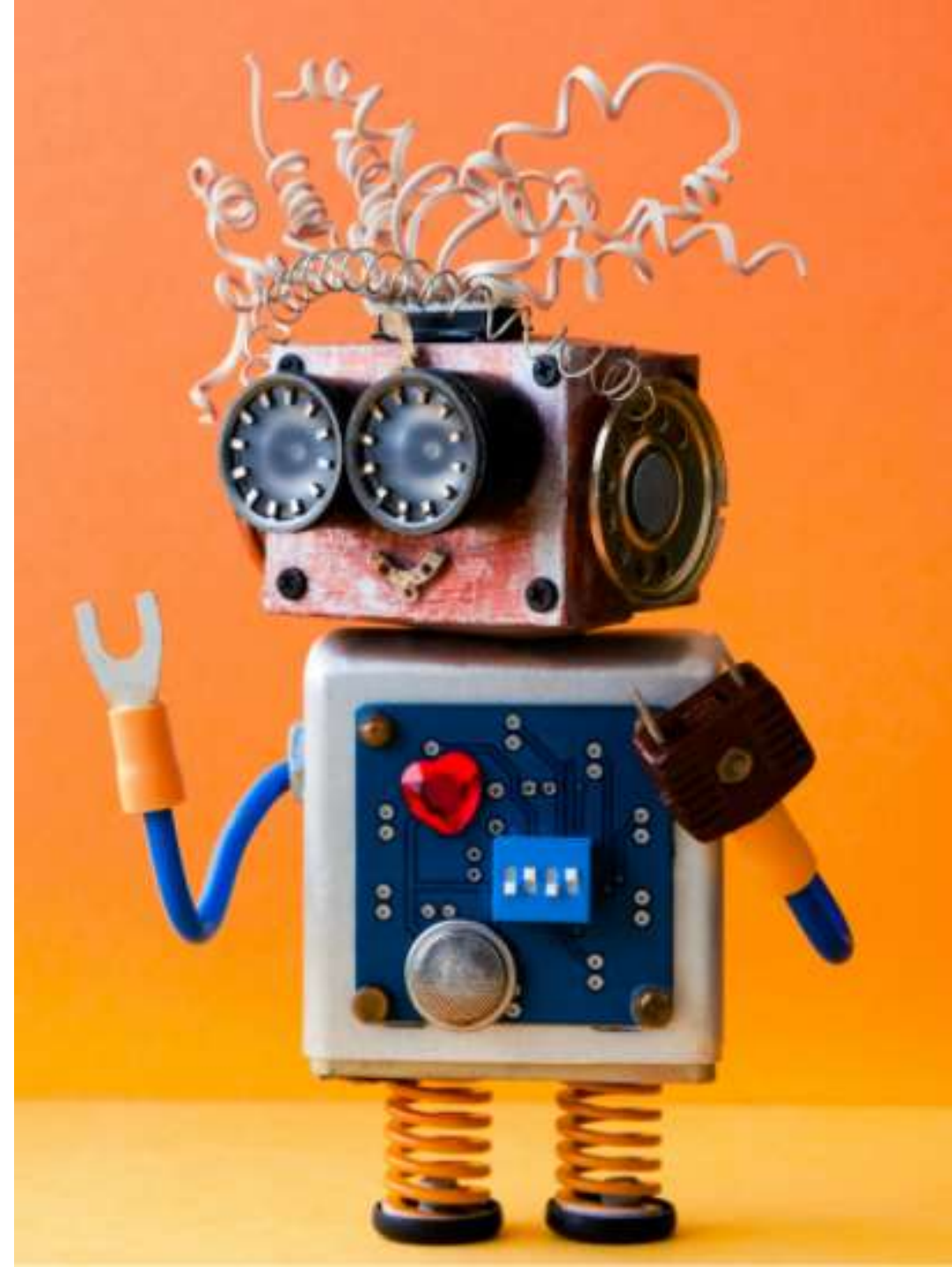


kitchen 3



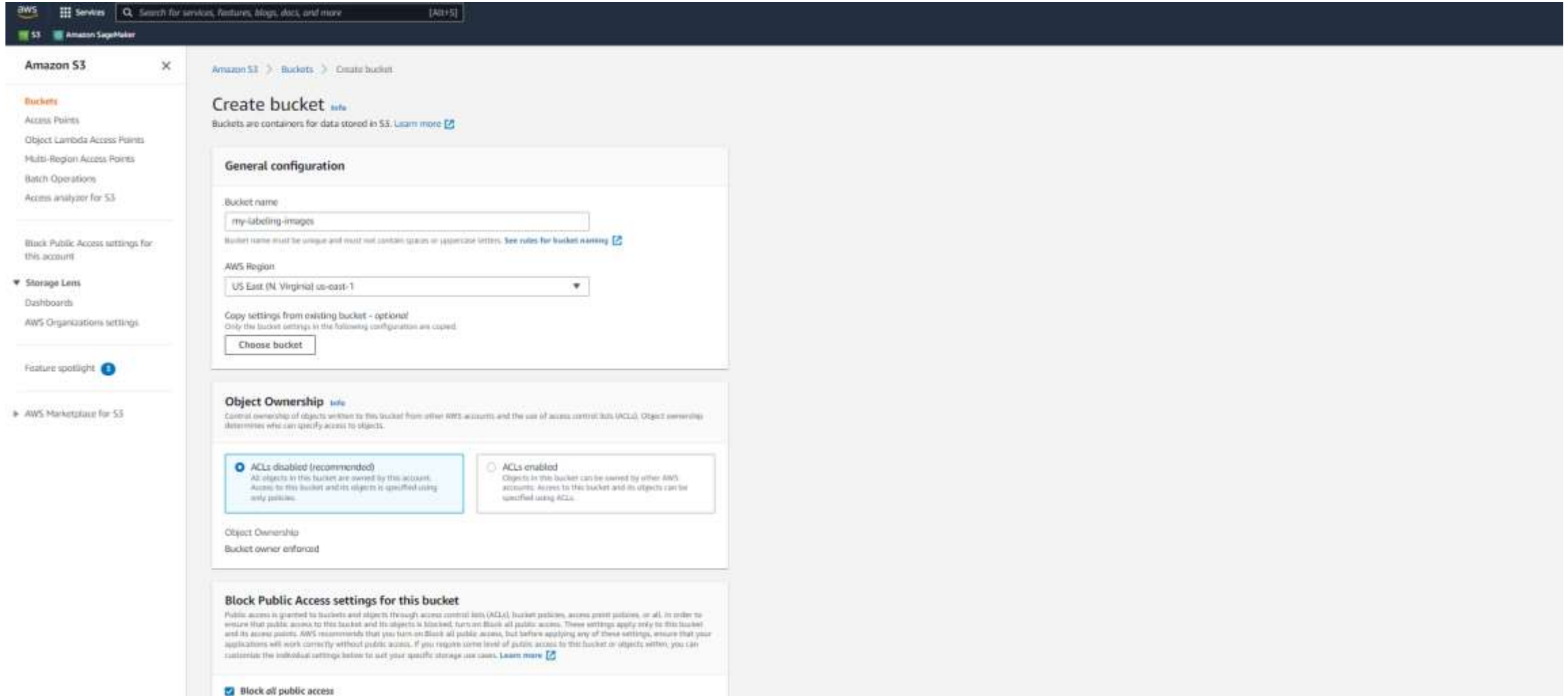
# FINAL END-OF-DAY CAPSTONE PROJECT SOLUTION

---



# LABELING IMAGES WITH BOUNDING BOXES

## UPLOAD THE IMAGES TO S3 BUCKET



The screenshot shows the AWS Management Console interface for creating a new S3 bucket. The left sidebar contains navigation links for Amazon S3, Buckets, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, Access analyzer for S3, Storage Lens, Dashboards, AWS Organizations settings, Feature spotlight, and AWS Marketplace for S3. The main content area is titled 'Create bucket' and includes a breadcrumb trail 'Amazon S3 > Buckets > Create bucket'. Below the title, it states 'Buckets are containers for data stored in S3. [Learn more](#)'. The configuration is divided into three sections: 'General configuration', 'Object Ownership', and 'Block Public Access settings for this bucket'. In the 'General configuration' section, the 'Bucket name' field is filled with 'my-labeling-images', and the 'AWS Region' is set to 'US East (N. Virginia) us-east-1'. There is a 'Choose bucket' button for copying settings from an existing bucket. The 'Object Ownership' section has two radio button options: 'ACLs disabled (recommended)' (which is selected) and 'ACLs enabled'. The 'Block Public Access settings for this bucket' section has a checkbox for 'Block all public access' which is checked. A 'Feature spotlight' badge is visible in the left sidebar.

**Amazon S3** X

Buckets

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

Access analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

AWS Organizations settings

Feature spotlight

AWS Marketplace for S3

Amazon S3 > Buckets > Create bucket

### Create bucket [info](#)

Buckets are containers for data stored in S3. [Learn more](#)

#### General configuration

Bucket name

my-labeling-images

Bucket name must be unique and must not contain spaces or uppercase letters. [See rules for bucket naming](#)

AWS Region

US East (N. Virginia) us-east-1

Copy settings from existing bucket - optional

Only the bucket settings in the following configuration are copied.

Choose bucket

#### Object Ownership [info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

☒ **ACLs disabled (recommended)**

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ **ACLs enabled**

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

Bucket owner enforces

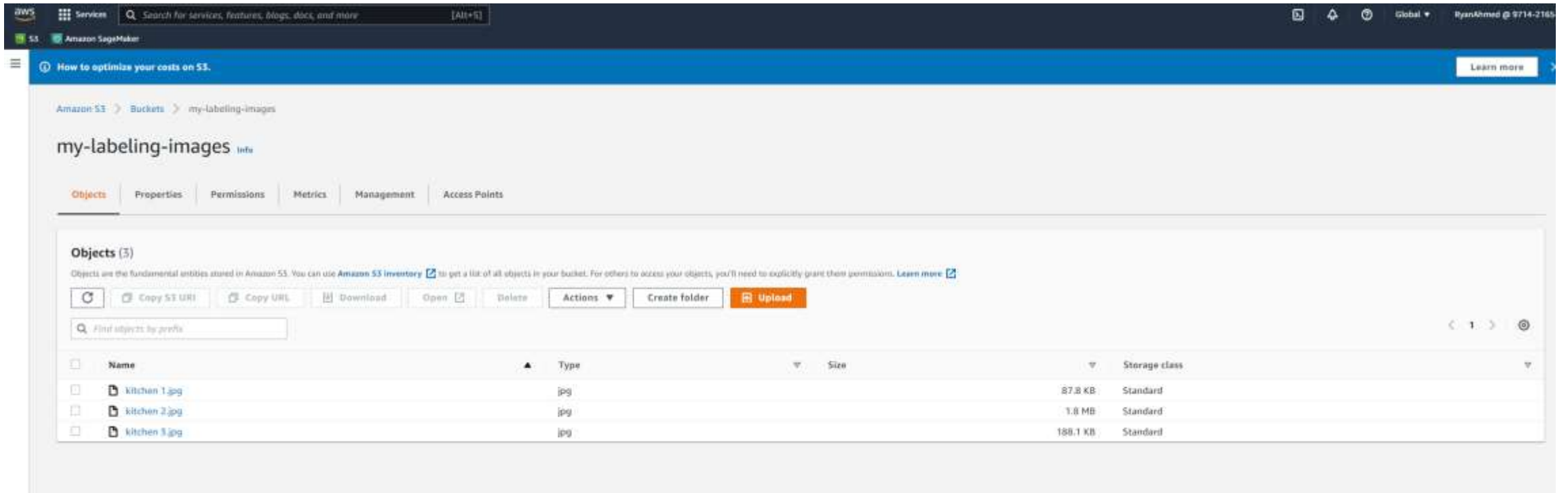
#### Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to set your specific storage use cases. [Learn more](#)

☒ **Block all public access**

# LABELING IMAGES WITH BOUNDING BOXES

## UPLOAD IMAGES



The screenshot displays the AWS Management Console interface for an Amazon S3 bucket named 'my-labeling-images'. The console shows the bucket's details, including tabs for Objects, Properties, Permissions, Metrics, Management, and Access Points. The 'Objects' tab is active, showing a list of three objects: 'kitchen 1.jpg', 'kitchen 2.jpg', and 'kitchen 3.jpg'. Each object is 87.8 KB in size and is stored in the 'Standard' storage class. The interface includes a search bar for objects, a list of actions (Copy S3 URI, Copy URL, Download, Open, Delete, Actions, Create folder, Upload), and a table of object details.

Name	Type	Size	Storage class
kitchen 1.jpg	jpg	87.8 KB	Standard
kitchen 2.jpg	jpg	87.8 KB	Standard
kitchen 3.jpg	jpg	87.8 KB	Standard

# LABELING IMAGES WITH BOUNDING BOXES

CREATE A LABELING JOB. DON'T FORGET TO CLICK ON  
COMPLETE DATA SETUP TO GENERATE THE MANIFEST FILE

The screenshot shows the 'Specify job details' page in the Amazon SageMaker console. The page is divided into two main sections: 'Job overview' and 'Data setup'.

**Job overview:**

- Job name:** A text input field containing 'bounding-boxes'. Below it, a note states: 'Maximum of 64 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in an AWS Region.'
- Label attribute name:** A checkbox labeled 'I want to specify a label attribute name different from the labeling job name.' Below it, a note states: 'Label attribute name is the key where your labels are stored in the augmented manifest. SageMaker uses the labeling job name as the default label attribute name.'
- Input data setup:** Two radio buttons are present. The first, 'Automated data setup', is selected. Below it, a note states: 'Provide the S3 location of the dataset you want labeled and let Ground Truth automatically connect to and use this dataset for your job.' The second, 'Manual data setup', is unselected. Below it, a note states: 'Provide the S3 location of a file (an input manifest file) that identifies the data objects you want labeled.'

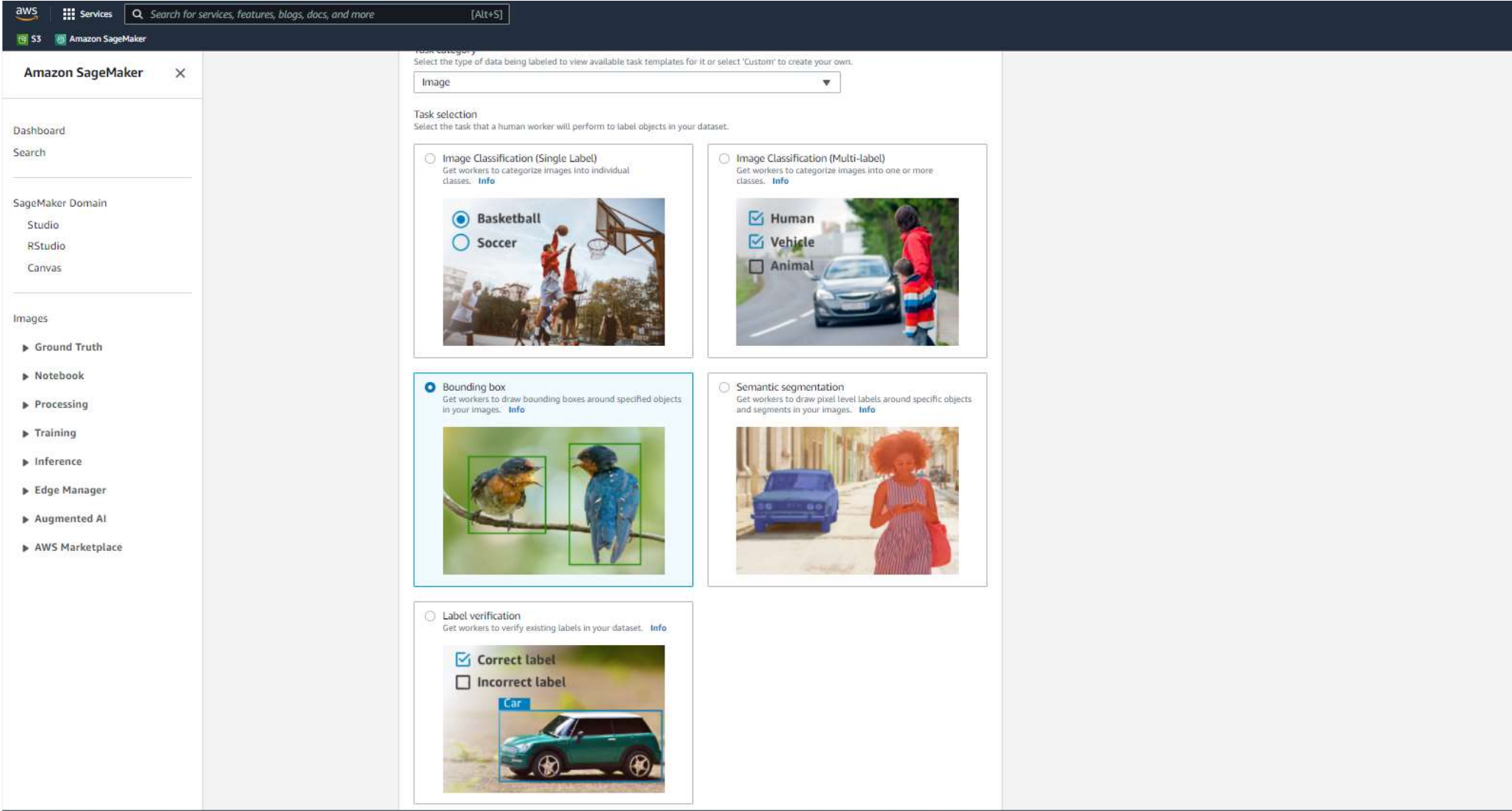
**Data setup:**

- S3 location for input datasets:** A text input field containing 's3://my-labeling-images/'. To its right is a 'Browse S3' button. Below the field, a note states: 'This is the location in S3 where your dataset objects are stored. SageMaker will use all data objects in this location for your labeling job.'
- S3 location for output datasets:** Two radio buttons are present. The first, 'Same location as input dataset', is selected. Below it, a note states: 'This is the location in S3 where your labeling job output data is stored.' The second, 'Specify a new location', is unselected.
- Data type:** A dropdown menu with 'Image' selected. Below it, a note states: 'Supported formats are jpg, png, and gif.'
- IAM Role:** A dropdown menu with 'AmazonSageMaker-ExecutionRole-20200325T182576' selected. Below it, a note states: 'Provide the ID of an IAM role for your task. AWS IAM encryption key for Amazon SageMaker to access your S3 bucket. Choose a role or let us create a role with the AmazonSageMakerFullAccess IAM policy attached.'

At the bottom of the page, there is a button labeled 'Use this button to prepare and complete your input data setup.'

# LABELING IMAGES WITH BOUNDING BOXES

SELECT THE BOUNDING BOX OPTION AND CLICK NEXT



# LABELING IMAGES WITH BOUNDING BOXES

## SELECT PRIVATE AND CHOOSE SUPER-LABELERS

Amazon

S3

Amazon SageMaker

Services

Search for services, features, blogs, docs, and more

[Alt+S]

Amazon SageMaker

×

Dashboard

Search

SageMaker Domain

- Studio
- RStudio
- Canvas

Images

- Ground Truth
- Notebook
- Processing
- Training
- Inference
- Edge Manager
- Augmented AI
- AWS Marketplace

Amazon SageMaker > Labeling jobs > Create labeling job

Step 1  
Specify job details

Step 2  
Select workers and configure tool

Select workers and configure tool

Workers

Info

Worker types

☐ Amazon Mechanical Turk  
An on-demand 24/7 workforce of over 500,000 independent contractors worldwide powered by Amazon Mechanical Turk.

☒ Private  
A team of workers that you have sourced yourself, including your own employees or contractors for handling data that needs to stay within your organization.

☐ Vendor managed  
A curated list of third party vendors that specialize in providing data labeling services, available via the AWS Marketplace.

Private teams

Choose from the teams you created in the private workforce or if you need to create a new team, save your progress and go to Labeling workforces to create a new one.

super-labelers

Task timeout

The maximum time a worker can work in a single task. If you want to use values beyond 8 hours, contact AWS Support.

1 hours 0 mins 0 secs

Task expiration time

The amount of time that a task remains available to workers before expiring. If you want to use values beyond 10 days, contact AWS Support.

10 days 0 hours 0 mins 0 secs

☐ Enable automated data labeling

Info

Amazon SageMaker will automatically label a portion of your dataset. It will train a model in your AWS account using Built-in Algorithm and your dataset. When you enable this, training jobs use new computing resources on your behalf. For cost information, See SageMaker [pricing](#)

► Additional configuration - optional

Workers per dataset object

► Display existing labels - optional

Enable this option to display existing labels for verification and adjustments. [Learn more](#)

# LABELING IMAGES WITH BOUNDING BOXES

PROVIDE INSTRUCTIONS AND CLICK CREATE!

The screenshot shows the Amazon SageMaker console interface for the Bounding box labeling tool. The left sidebar contains navigation links for Dashboard, Search, SageMaker Domain (Studio, RStudio, Canvas), and Images (Ground Truth, Notebook, Processing, Training, Inference, Edge Manager, Augmented AI, AWS Marketplace). The main content area is titled 'Bounding box labeling tool' and includes a 'Preview' button. Below the title, there is a text box for instructions: 'Draw a bounding boxes around ovens and fridges only'. To the left of the main image, there are two examples: a 'Good example' with a correct bounding box and a 'Bad example' with an incorrect bounding box. The main image shows a kitchen with a refrigerator, oven, and microwave. To the right of the image, there is a 'Labels' section with input fields for 'Fridge' and 'Oven', and an 'Add new label' button. At the bottom, there are 'Cancel', 'Previous', and 'Create' buttons.

Amazon SageMaker

Dashboard  
Search

SageMaker Domain  
Studio  
RStudio  
Canvas

Images  
► Ground Truth  
► Notebook  
► Processing  
► Training  
► Inference  
► Edge Manager  
► Augmented AI  
► AWS Marketplace

► Additional configuration - optional  
Workers per dataset object

► Display existing labels - optional  
Enable this option to display existing labels for verification and adjustments. [Learn more](#)

**Bounding box labeling tool** [Preview](#)

Provide labeling instructions with examples below for workers. Workers will be viewing these instructions when they perform your task. Workers can choose up to 50 labels. See guidelines for [See guidelines for creating high-quality instructions](#)

Hi Ht B I A

Draw a bounding boxes around ovens and fridges only

**Good example**  
Enter description of a correct bounding box label

**Bad example**  
Enter description of an incorrect bounding box label

**Labels**  
Add up to 50 labels

Fridge X

Oven X

[Add new label](#)  
You can add 48 more labels.

► Additional instructions - optional

Cancel Previous **Create**



# LABELING IMAGES WITH BOUNDING BOXES

REVIEW THE LABELING JOB HERE!


Amazon SageMaker

Labeling job bounding-boxes was successfully created.

Amazon SageMaker > Labeling jobs > bounding-boxes


### bounding-boxes

#### Labeling job summary


Status	Input dataset location	ARN
 In progress	<a href="#">s3://my-labeling-images/dataset-202203251182592/manifest</a>	<a href="#">arn:aws:sagemaker:us-east-1:971421653261:labeling-job/bounding-boxes</a>
Task type	Output dataset location	Worker type
Bounding box	<a href="#">s3://my-labeling-images/bounding-boxes/</a>	Private
Creation time		Workteam ARN
		<a href="#">arn:aws:sagemaker:us-east-1:971421653261:workteam/private-crowd/super-labelers</a>

Output | Tags


#### Labeled dataset objects



kitchen 1.jpg



kitchen 2.jpg



kitchen 3.jpg



# LABELING IMAGES WITH BOUNDING BOXES

LABEL THE FRIDGE AND OVEN



Labels				
<input type="text" value="Search labels"/>				
	Fridge			1
	Oven			2

# LABELING IMAGES WITH BOUNDING BOXES

LABEL THE OVEN IN THE IMAGE



# LABELING IMAGES WITH BOUNDING BOXES

## COORDINATES OF THE BOUNDING BOXES



### Previewing Answers Submitted by Workers

This message is only visible to you and will not be shown to Workers.

The submitted result data is shown below:

**taskAnswers**

```
[
  {
    "boundingBox": {
      "boundingBoxes": [
        {
          "height": 400,
          "label": "Oven",
          "left": 510,
          "top": 495,
          "width": 321
        }
      ],
      "inputImageProperties": {
        "height": 896,
        "width": 1280
      }
    }
  }
]
```

# LABELING IMAGES WITH BOUNDING BOXES

BOUNDING BOXES LABELING JOB IS NOW COMPLETE

Amazon SageMaker

Dashboard  
Search

SageMaker Domain  
Studio  
SStudio  
Canvas

Images  
► Ground Truth  
► Notebook  
► Processing  
► Training  
► Inference  
► Edge Manager  
► Augmented AI  
► AWS Marketplace

Amazon SageMaker > Labeling jobs > bounding-boxes-clone

### bounding-boxes-clone

Actions

#### Labeling job summary

View labeling test


Status Complete	Input dataset location s3://my-labeling-images/mnist-252205251184864.manifest	ARN arn:aws:sagemaker:us-east-1:927421655261:labeling-job/bounding-boxes-clone
Task type Bounding box	Output dataset location s3://my-labeling-images/bounding-boxes-clone/	Worker type Private
Creation time	Labeled / total dataset objects 3 / 3	Workteam ARN arn:aws:sagemaker:us-east-1:927421655261:workteam/private-crowd/sage-labelers

Output | Tags


#### Labeled dataset objects (3)

Query output


1 2 3



kitchen 1.jpg



kitchen 2.jpg



kitchen 3.jpg

# LABELING IMAGES WITH BOUNDING BOXES

SELECT A SAMPLE IMAGE TO REVIEW THE RESULTING LABEL

aws Services Search for services, features, blogs, docs, and more [Alt+S]


S3 Amazon SageMaker

Amazon SageMaker X

Amazon SageMaker > Labeling jobs > bounding-boxes-clone > kitchen 1.jpg

## kitchen 1.jpg

Dataset object summary



Source  
s3://my-labeling-images/kitchen 1.jpg

Labels (2)

Search by label name

Label name	Source	Confidence	Task type
Fridge	Human annotated	0.00	Bounding box
Oven	Human annotated	0.00	Bounding box

# LABELING IMAGES WITH BOUNDING BOXES

## OUTPUT MANIFEST FILE

```
output [3].manifest - Notepad
File Edit View

{"source-ref":"s3://my-labeling-images/kitchen 1.jpg","bounding-boxes-clone":{"image_size":[{"width":800,"height":531,"depth":3}],"annotations":[{"class_id":0,"top":119,"left":95,"height":401,"width":112}, {"class_id":1,"top":288,"left":285,"height":133,"width":108}]},"bounding-boxes-clone-metadata":{"objects":[{"confidence":0}, {"confidence":0}], "class-map":{"0":"Fridge", "1":"Oven"}, "type":"groundtruth/object-detection", "human-annotated":"yes", "creation-date":clone}}
{"source-ref":"s3://my-labeling-images/kitchen 2.jpg","bounding-boxes-clone":{"image_size":[{"width":5998,"height":3999,"depth":3}],"annotations":[{"class_id":0,"top":1662,"left":5272,"height":1605,"width":723}, {"class_id":1,"top":1734,"left":3639,"height":774,"width":416}]},"bounding-boxes-clone-metadata":{"objects":[{"confidence":0}, {"confidence":0}], "class-map":{"0":"Fridge", "1":"Oven"}, "type":"groundtruth/object-detection", "human-annotated":"yes", clone}}
{"source-ref":"s3://my-labeling-images/kitchen 3.jpg","bounding-boxes-clone":{"image_size":[{"width":1280,"height":896,"depth":3}],"annotations":[{"class_id":1,"top":476,"left":501,"height":420,"width":325}]},"bounding-boxes-clone-metadata":{"objects":[{"confidence":0}], "class-map":{"1":"Oven"}, "type":"groundtruth/object-detection", "human-annotated":"yes", "job-name":"labeling-job/bounding-boxes-clone"}}
```