

Lab: Document Handling with Amazon Textract and Amazon Polly

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Cloud Service Provider (CSP): Amazon Web Services (AWS)

Areas and Services of Focus: Amazon Textract, Amazon Polly, AWS Lambda, Amazon S3 modifying source code.

Lab Objective:

In this AWS SimuLearn in the practice section, you extract and view raw text from a sample document using Amazon Textract. Then, you use Amazon Polly in an AWS Lambda function to convert an image file that contains text to an audio MP3 file. To test the process, you verify the Amazon Simple Storage Service (Amazon S3) bucket location of the generated MP3 file and listen to the audio. In the DIY section, you edit and re-run the Lambda function by using Amazon Polly generative engine and a voice ID.

STEP ONE: Analyze the Document in Amazon Textract.

The screenshot shows the Amazon Textract 'Analyze Document' interface. On the left, there's a sidebar with 'Amazon Textract' and 'Analyze Document' links. The main area displays a document titled 'paystub' with a table of results. The table includes fields like 'CO. FILE DEPT. CLOCK NUMBER', 'ANY COMPANY CORP.', 'Period ending: 7/18/2008', '475 ANY AVENUE', 'Pay date: 7/25/2008', 'ANYTOWN, USA 10101', 'Social Security Number: 987-65-4321', 'Taxable Marital Status: Married', 'JOHN STILES', 'Exemptions/Allowances: 101 MAIN STREET', 'Federal: 3, \$25 Additional Tax', 'ANYTOWN, USA 12345', 'State: 2', 'Local: 2', 'Earnings rate', 'hours', 'this period', 'year to date', 'Other Benefits and', 'Regular', '10.00', '32.00'.

STEP TWO: Listen to the input text in the Text-to-Speech section. Navigate to Amazon Polly and review the S3 synthesis tasks.

The screenshot shows the Amazon Polly 'Text-to-Speech' interface. On the left, there's a sidebar with 'Amazon Polly', 'Text-to-Speech', 'Lexicons', and 'S3 synthesis tasks' links. The main area displays the 'Text-to-Speech' section with a 'Generative' engine selected. The language is set to 'English, US' and the voice is 'Ruth, Female'. The input text is 'Hi, I'm Ruth. I can read any text for you. Test it out!'.

STEP THREE: Navigate to Amazon S3 and review the buckets.

Amazon S3

General purpose buckets

Directory buckets

Table buckets

Access Grants

Access Points for general purpose buckets

Access Points for directory buckets

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

Account snapshot - updated every 24 hours All AWS Regions [View Storage Lens dashboard](#)

Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. [Learn more](#)

General purpose buckets Directory buckets

General purpose buckets (3) Info All AWS Regions [Refresh](#) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

Buckets are containers for data stored in S3.

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	aws-labs-resources-krxqqla59sui8d-us-east-1-540076085980	US East (N. Virginia) us-east-1	View analyzer for us-east-1	October 24, 2022, 19:53:44 (UTC-04:00)
<input type="radio"/>	aws-labs-resources-r5b3y6ojjszcap-us-east-1-540076085980	US East (N. Virginia) us-east-1	View analyzer for us-east-1	October 31, 2023, 16:42:54 (UTC-04:00)
<input type="radio"/>	labdatabucket-cd9b90d0	US East (N. Virginia) us-east-1	View analyzer for us-east-1	July 11, 2025, 18:10:14 (UTC-04:00)

STEP FOUR: After selecting the labdata bucket, click Objects and review the jpeg file.

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Storage Lens

labdatabucket-cd9b90d0 Info

Objects Metadata Properties Permissions Metrics Management Access Points

Objects (1) [Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#)

[Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	textract_sample.jpeg	jpeg	July 11, 2025, 18:12:20 (UTC-04:00)	154.2 KB	Standard

STEP FIVE: Navigate back to Lambda, select Functions and select the “TexttoSpeech” function name.

TextToSpeech [Throttle](#) [Copy ARN](#)

[This function belongs to an application. Click here to manage it.](#)

Function overview Info

[Diagram](#) [Template](#)

[Add trigger](#)

TextToSpeech

Layers (0)

Related functions: [Select a function](#)

[Add destination](#)

[Export to Infrastructure Composer](#)

Description

-

Last modified

8 minutes ago

Function ARN

[arn:aws:lambda:us-east-1:5400760859:tToSpeech](#)

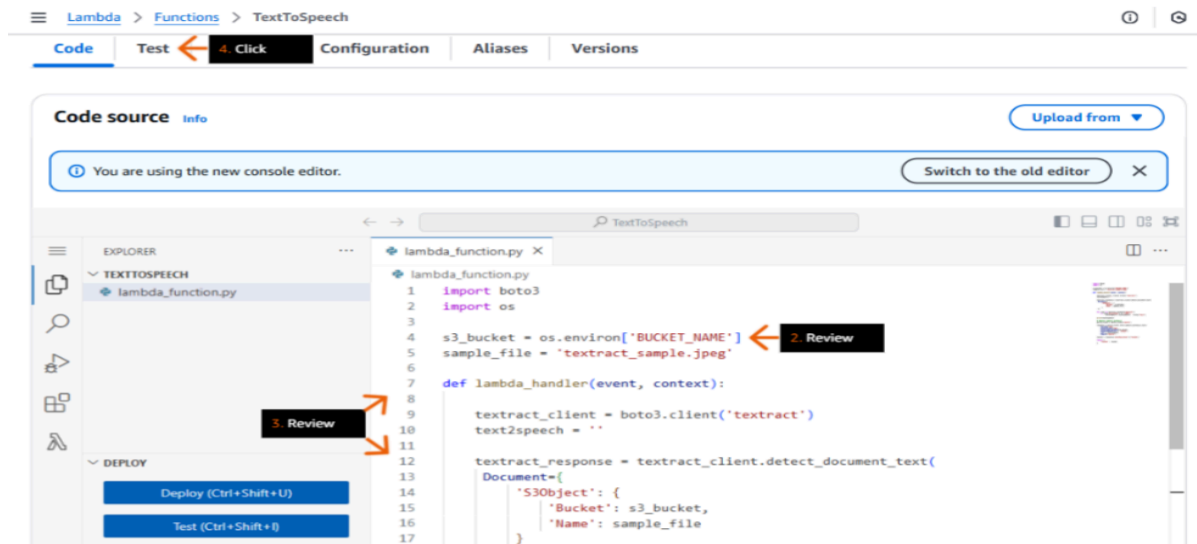
Application

[LabStack-16afeb7b-9864-4c6f-b5e0-710e20NUCShkKx54WAqJJ3sSyw-0](#)

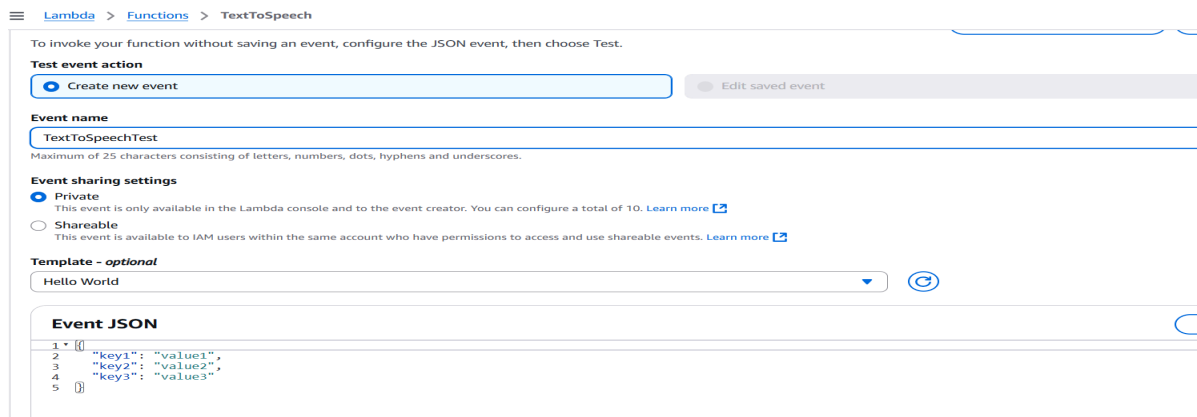
Function URL Info

-

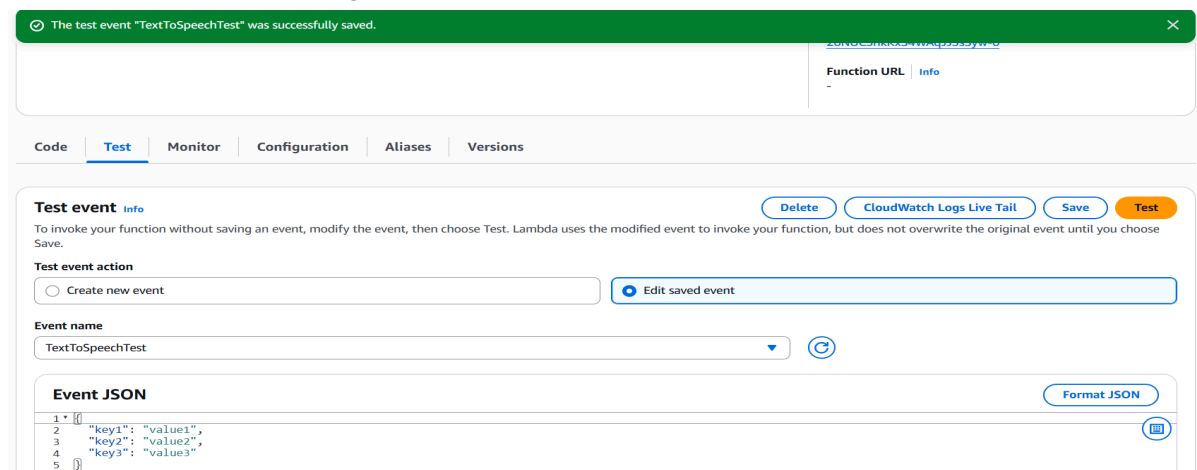
STEP SIX: Scroll down to Code and review the source code of the python file.



STEP SEVEN: Create a test event for the “TexttoSpeech” function.



STEP EIGHT: After creating a test event, select Test.



STEP NINE: In the Details section, review the log output information.

Executing function: succeeded (logs [logs](#))

▼ Details

```
{
  "taskId": "2c57da66-22d1-4710-9ad7-d15ed76ea730"
}
```

Summary

Code SHA-256 JCSVvq8OHaObLpsDMDZR+YcUWHnjPTk6+FfdTyES1xA=	Execution time 55 seconds ago
Function version \$LATEST	Request ID c3432c2b-4dfb-45f5-a2d3-9ff58a3d9f4a
Duration 4231.81 ms	Billed duration 4232 ms
Resources configured 128 MB	Max memory used 84 MB
Init duration 298.05 ms	
Log output	

The area below shows the last 4 KB of the execution log. [Click here](#) to view the corresponding CloudWatch log group.

START RequestId: c3432c2b-4dfb-45f5-a2d3-9ff58a3d9f4a Version: \$LATEST
Amazon Textract is a service that automatically extracts text and data from scanned documents. Amazon Textract goes beyond simple optical character recognition (OCR) to also identify the contents of fields in forms and information stored in tables. Many companies today extract data from documents and forms through manual data entry that's slow and expensive or through simple optical character recognition (OCR) software that is difficult to customize. Rules and workflows for each document and form often need to be hard-coded and updated with each change to the form or when dealing with multiple forms. If the form deviates from the rules, the output is often scrambled and unusable. Amazon Textract overcomes these challenges by using machine learning to instantly "read" virtually any type of document to accurately extract text and data without the need for any manual effort or custom code. With Textract you can quickly automate document workflows, enabling you to process millions of document pages in hours. Once the information is captured, you can take action on it within your business applications to initiate next steps for a loan application or medical claims processing. Additionally, you can create

STEP TEN: Navigate back to the labdata bucket in Amazon S3 and select Objects tab and the checkbox next to the output MP3 file. After downloading the file, listen to the audio recording.

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labdatabucket-cd9b90d0 [Info](#)

Objects | Metadata | Properties | Permissions | Metrics | Management | Access Points

Objects (1/2)

[Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#)

[Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/>	output.2c57da66-22d1-4710-9ad7-d15ed76ea730.mp3	mp3	July 11, 2025, 18:23:01 (UTC-04:00)	512.6 KB	Standard
<input type="checkbox"/>	textract_sample.jpeg	jpeg	July 11, 2025, 18:12:20 (UTC-04:00)	154.2 KB	Standard

STEP ELEVEN: After completing the final step in the Simulearn Practice lab, navigate to the DIY section to complete the lab based on skills acquired.

STEP TWELVE DIY (Do-It-Yourself):

1. Edit and re-run the Lambda function by using the Amazon Polly generative engine and Ruth voice ID.
2. Confirm the existence of a completed synthesis task with these settings.

mazon Polly

Text-to-Speech

Icons

synthesis tasks

Text-to-Speech Info

[Save to S3](#) [Download](#) [Listen](#)

Engine Info

☒ **Generative**
Produces the most expressive and adaptive speech using Generative AI.

☐ **Long-Form**
Produces the most natural sounding speech for longer content.

☐ **Neural**
Produces more natural and human-like speech than Standard Engine.

☐ **Standard**
Produces natural-sounding speech.

Language Info

English, US

Voice Info

Ruth, Female

Input text Info

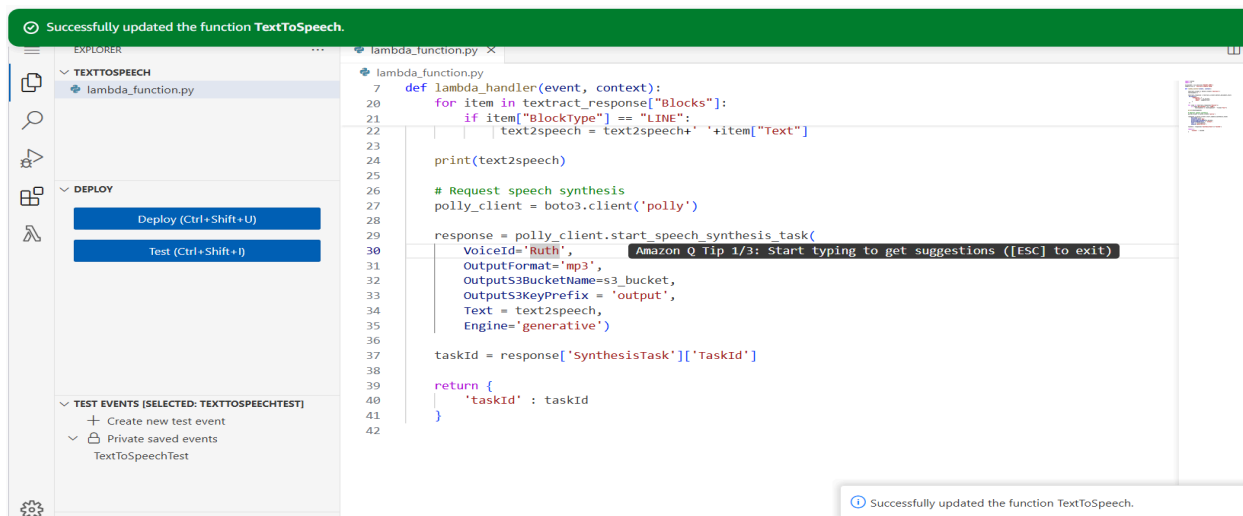
Completing the DIY portion of the lab.

38 characters used

[Restore default text](#) [Clear text](#)

☐ SSML Info

In the photo below, I modified the code according to the instructions to the VoiceID of “Ruth” and the engine to “generative”.



DIY Goals

1. Edit and re-run the Lambda function by using the Amazon Polly generative engine and Ruth voice ID.
2. Confirm the existence of a completed synthesis task with these settings.

Solution Validation Method

Our validation service will confirm that at least one MP3 file exists in the labdatabucket S3 bucket. It will then check that at least one Amazon Polly synthesis task successfully completed using the generative voice engine and Ruth voice ID.

****Hints**:**
Set the Engine and VoiceID parameters in the Lambda function to generative, and Ruth respectively.

Validation Form

1. Lab data bucket

labdatabucket-cd9b90d0

Validation result

Validation complete!

SUMMARY:

This lab is a part of the AWS Skill Builder Exam Prep Plan for the AWS AI Practitioner Certification. To access the labs, you must have a Skill Builder subscription. The focus of this lab session was to gain some hands-on experience with Amazon Textract and Amazon Polly.

After completing the guided practice, I was able to complete the DIY section which incorporated aspects of the practice tasks, but without step-by-step instructions. In my initial attempt to complete the DIY task, AWS was unable to validate that the attempt was completed. One aspect of AWS, and cloud service providers in general, that I must get used to is the time it takes for a task to go from pending to complete. Although I had correctly changed the code, and made sure Amazon Polly and the Lambda function was updated, there seemed to be a bit of latency that I didn't experience during the practice session.

Once I refreshed a couple of times the labdata bucket was validated and complete. Overall, this was a great introduction to Amazon services such as Textract, Polly, and Lambda.