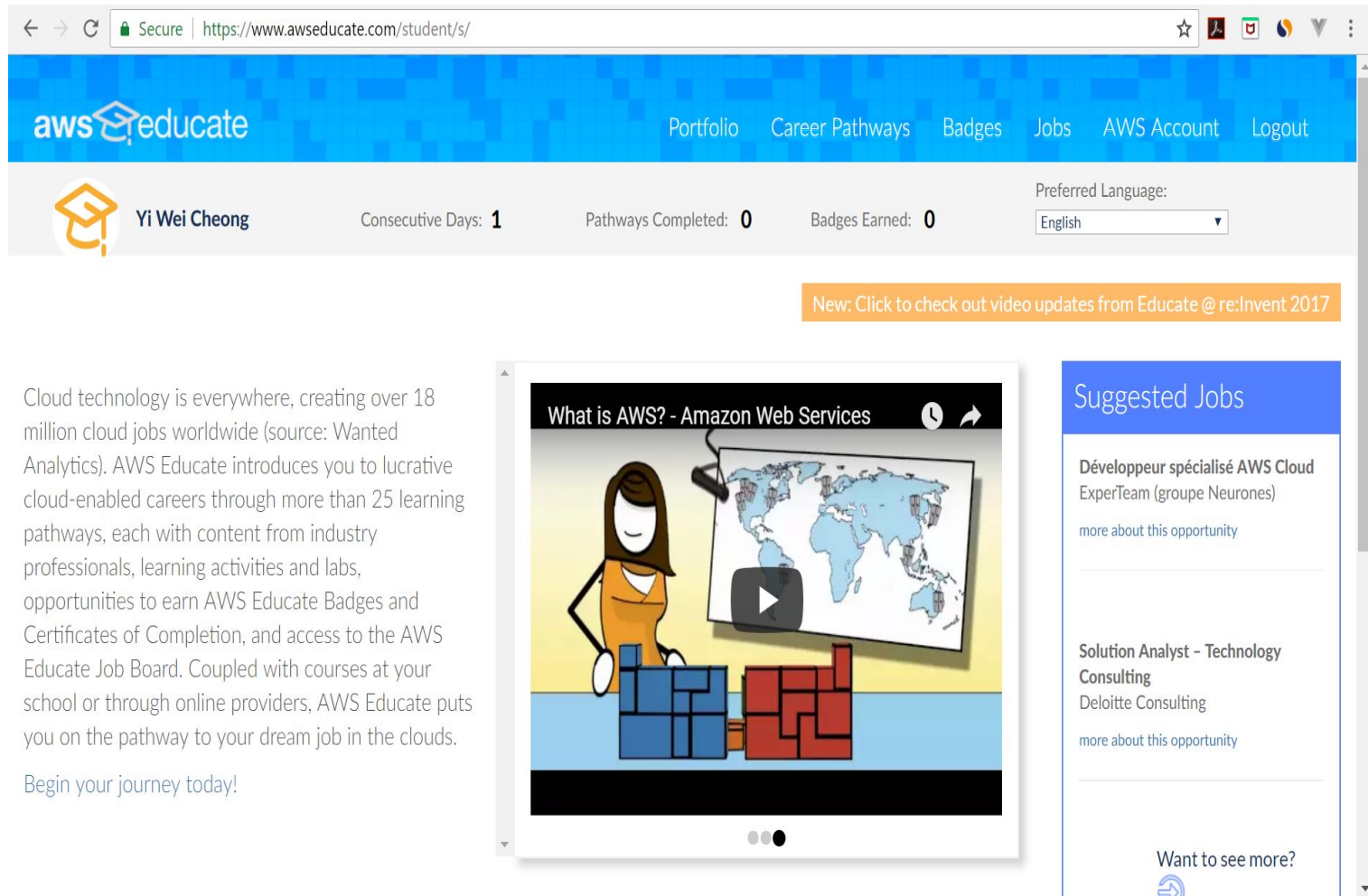


AWS Educate

Go to <https://www.awseducate.com/student/s/>



The screenshot shows the AWS Educate student dashboard. At the top, there's a navigation bar with links to Portfolio, Career Pathways, Badges, Jobs, AWS Account, and Logout. Below this, a user profile section for 'Yi Wei Cheong' displays progress: Consecutive Days: 1, Pathways Completed: 0, and Badges Earned: 0. A 'Preferred Language' dropdown is set to 'English'. A yellow banner promotes video updates from Educate @ re:Invent 2017. The main content area features a video player titled 'What is AWS? - Amazon Web Services' with a play button. To the right, a 'Suggested Jobs' section lists two roles: 'Développeur spécialisé AWS Cloud' at ExperTeam and 'Solution Analyst - Technology Consulting' at Deloitte Consulting, each with a link to 'more about this opportunity'. At the bottom right, there's a 'Want to see more?' link.

Cloud technology is everywhere, creating over 18 million cloud jobs worldwide (source: Wanted Analytics). AWS Educate introduces you to lucrative cloud-enabled careers through more than 25 learning pathways, each with content from industry professionals, learning activities and labs, opportunities to earn AWS Educate Badges and Certificates of Completion, and access to the AWS Educate Job Board. Coupled with courses at your school or through online providers, AWS Educate puts you on the pathway to your dream job in the clouds.

Begin your journey today!

What is AWS? - Amazon Web Services

Suggested Jobs

- Développeur spécialisé AWS Cloud**
ExperTeam (groupe Neurones)
[more about this opportunity](#)
- Solution Analyst - Technology Consulting**
Deloitte Consulting
[more about this opportunity](#)

[Want to see more?](#)


AWS Educate

You should be already logged in. If not, login with your email and the password you set before.

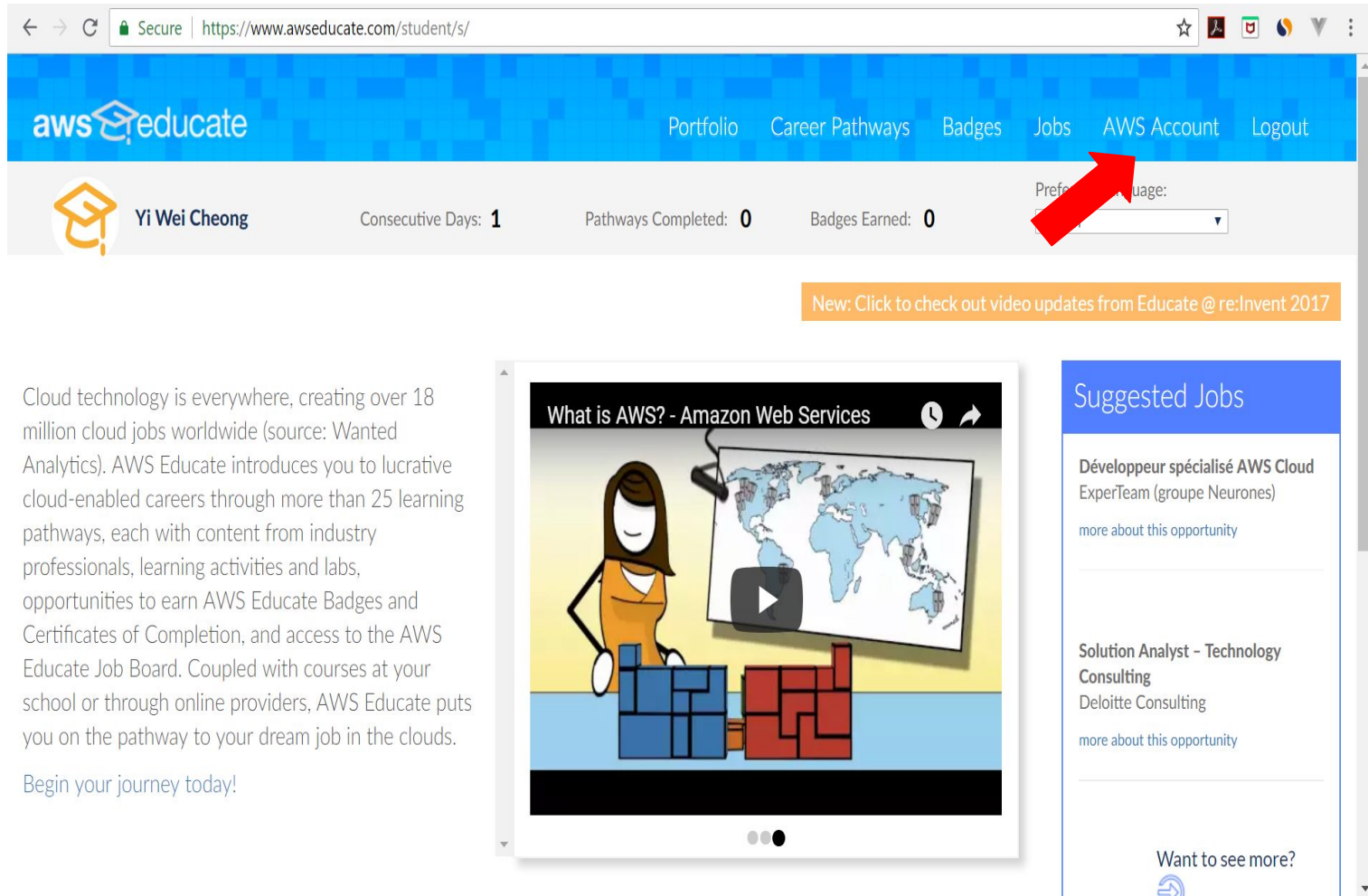


hi :)

[Forgot password?](#) | [Not an AWS Educate member? Apply now.](#)

[SIGN IN](#) 

Click “AWS Account”



The screenshot shows the AWS Educate student dashboard. The top navigation bar includes links for Portfolio, Career Pathways, Badges, Jobs, AWS Account, and Logout. A red arrow points to the 'AWS Account' link. Below the navigation bar, the user's name 'Yi Wei Cheong' is displayed, along with statistics: Consecutive Days: 1, Pathways Completed: 0, and Badges Earned: 0. A language dropdown menu is also visible. A banner at the top right encourages users to check out video updates from Educate @ re:Invent 2017. The main content area features a video player titled 'What is AWS? - Amazon Web Services' and a 'Suggested Jobs' section with two job listings: 'Développeur spécialisé AWS Cloud' and 'Solution Analyst - Technology Consulting'.

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What is AWS? - Amazon Web Services

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ExperTeam (groupe Neurones)
[more about this opportunity](#)
- Solution Analyst - Technology Consulting**
Deloitte Consulting
[more about this opportunity](#)

[Want to see more?](#)

AWS Educate



AWS Educate Starter Account

Your cloud journey has only just begun. Use your AWS Educate Starter Account to access the AWS Console and resources, and start building in the cloud!

[AWS Educate Starter Account](#)



Your account has an estimated **74** credits remaining and access will end on **Mar 11, 2020**.

Note: Clicking this button will take you to a third party site managed by Vocareum, Inc. ("Third Party Servicer"). In addition to the AWS Educate terms of service, your use of the AWS Educate Starter Account is governed by the Third Party Servicer's terms, including its Privacy Policy. AWS assumes no responsibility or liability and makes no representations or warranties regarding services provided by a Third Party Servicer.

Welcome to AWS Educate Starter Account

Use your Starter Account to access to a wide variety of AWS Services and start building! Click on the AWS Console button to sign in and get started.

- What AWS services can I use in my Starter Account?

You can use the following services in your Starter Account: apigateway, athena, cloud9, cloudformation, cloudfront, cloudtrail, cloudwatch, codecommit, codedeploy, codepipeline, cognito-identity, cognito-idp, cognito-sync, comprehend, deeplens, dynamodb, ec2, ecs, elasticache, elasticfilesystem, elasticloadbalancing, elasticmapreduce, events, execute-api, glue, iam, inspector, iot, kinesis, kinesisanalytics, firehose, kms, lambda, lex, logs, machinelearning, mobilehub, opsworks, polly, rds, rekognition, route53 (other than domain name purchasing), s3, sns, sqs, swf, sagemaker, translate, transcribe

- What regions can I use with a Starter Account?

- Are Service Linked Roles supported?

Your Starter Account Status



Active
full access ()



\$74.67
credits (estimated)




188d 1:17:05
remaining term



2:60
session time

[Account Details](#)[AWS Console](#)

Click “AWS Console”



Services ▾ Resource Groups ▾ ★


tszhin @ 1056-1538-5369 ▾ Oregon ▾ Support ▾

AWS services


Find a service by name or feature (for example, EC2, S3 or VM, storage). 🔍

> Recently visited services


▽ All services

**Compute**


- EC2
- Lightsail ↗
- Elastic Container Service
- EKS
- Lambda
- Batch
- Elastic Beanstalk

**Storage**


- S3
- EFS
- Glacier
- Storage Gateway

**Database**


- RDS
- DynamoDB

**Management Tools**


- CloudWatch
- AWS Auto Scaling
- CloudFormation
- CloudTrail
- Config
- OpsWorks
- Service Catalog
- Systems Manager
- Traffic Advisor
- Managed Services

**Media Services**


- Elastic Transcoder
- Kinesis Video Streams
- MediaConvert
- MediaLive
- MediaPackage

**Mobile Services**


- Mobile Hub
- AWS AppSync
- Device Farm
- Mobile Analytics

**AR & VR**


- Amazon Sumerian

**Application Integration**


- Step Functions
- Amazon MQ
- Simple Notification Service
- Simple Queue Service
- SWF

**Customer Engagement**

Helpful tips

**Manage your costs**

Monitor your AWS costs, usage, and reservations using AWS Budgets. [Start now](#)

**Create an organization**

Use AWS Organizations for policy-based management of multiple AWS accounts. [Start now](#)

Explore AWS

Machine Learning with Amazon SageMaker

The fastest way to build, train, and deploy machine learning models. [Learn more.](#) ↗

Amazon Relational Database Service (RDS)

RDS manages and scales your database for you. RDS supports Aurora, MySQL, PostgreSQL, MariaDB, Oracle, and SQL Server. [Learn more.](#) ↗

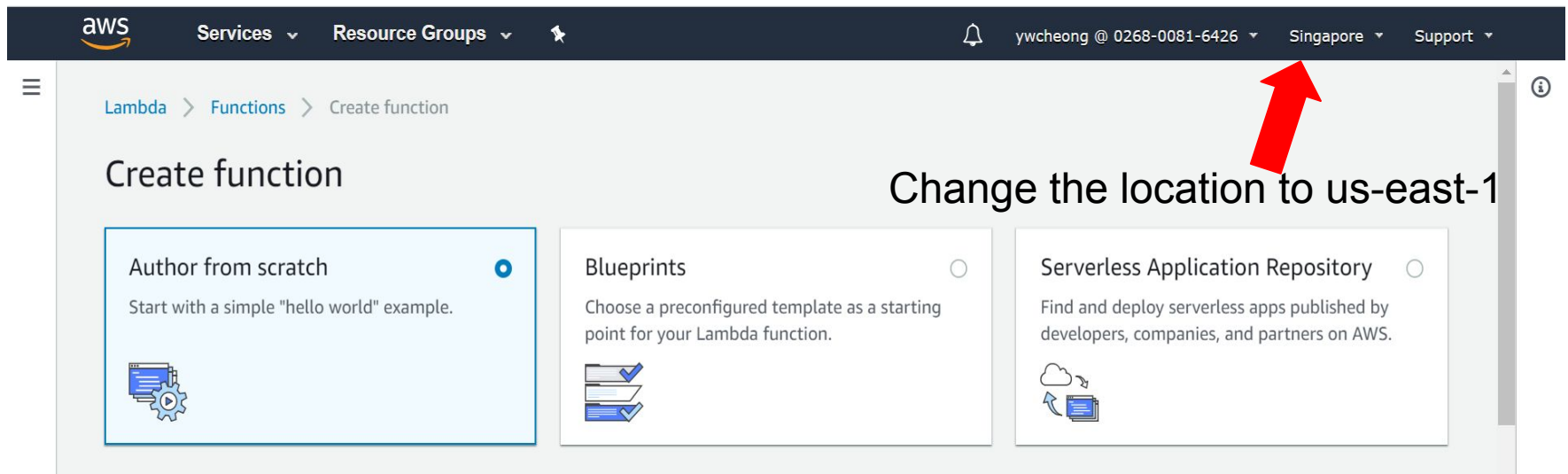
Click "Lambda"



AWS Educate

The screenshot shows the AWS Lambda console interface for creating a new function. The browser address bar indicates the URL: <https://us-west-2.console.aws.amazon.com/lambda/home?region=us-west-2#/create?firstrun=true>. The console header shows the user is logged in as 'ywcheong @ 0268-0081-6426' in the 'Oregon' region. The left sidebar shows the 'AWS Lambda' service selected, with 'Functions' highlighted. The main content area is titled 'Create function' and contains three options: 'Author from scratch' (selected with a radio button and a red arrow), 'Blueprints', and 'Serverless Application Repository'. The 'Author from scratch' option is described as 'Start with a simple "hello world" example.' and includes an icon of a code editor and a gear. The 'Blueprints' option is described as 'Choose a preconfigured template as a starting point for your Lambda function.' and includes an icon of a document with checkmarks. The 'Serverless Application Repository' option is described as 'Find and deploy serverless apps published by developers, companies, and partners on AWS.' and includes an icon of a cloud and a document. Below these options, the 'Author from scratch' section is expanded, showing an 'Info' link and input fields for 'Name' (with placeholder text 'myFunctionName') and 'Runtime'.

Make sure you are in US-east(N.Virginia)



- I can't start any resources. What happened?

Please check in top right of you AWS Console view to confirm the region is N. Virginia. You can only start services in us-east-1 (northern virginia) in a Starter Account. Change your region to us-east-1 to start your resources.

AWS Educate

Function name

Enter a name that describes the purpose of your function.

hello

Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime [Info](#)

Choose the language to use to write your function.

Python 3.6

Permissions [Info](#)

Lambda will create an execution role with permission to upload logs to Amazon CloudWatch Logs. You can configure and modify permissions further when you add triggers.

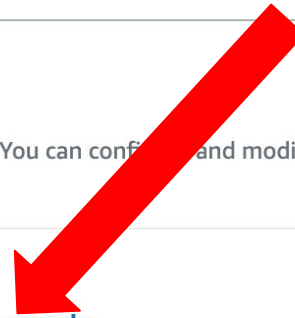
▼ Choose or create an execution role

Execution role

Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

Create a new role with basic Lambda permissions


Click on "IAM console"
IAM console will open in a new tab





Create role


1 2 3 4

Select type of trusted entity

**AWS service**
EC2, Lambda and others

**Another AWS account**
Belonging to you or 3rd party

**Web identity**
Cognito or any OpenID provider

**SAML 2.0 federation**
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose the service that will use this role

EC2

Allows EC2 instances to call AWS services on your behalf.

Lambda

Allows Lambda functions to call AWS services on your behalf.

API Gateway	CodeBuild	EKS	Kinesis	S3
AWS Backup	CodeDeploy	EMR	Lambda	SMS
AWS Support	Config	ElastiCache	Lex	SNS
Amplify	Connect	Elastic Beanstalk	License Manager	SWF

* Required

Cancel

Next: Permissions

Select "Lambda"
Click "Next"

Create role

1 2 3 4

▼ Attach permissions policies

Choose one or more policies to attach to your new role.

Create policy



Filter policies ▼

Q lambdabasic

Showing 1 result

Policy name ▼

Used as

Description



 AWSLambdaBasicExecutionRole

Permissions policy (1)

Provides write permissions to CloudWat...

* Required

Cancel

Previous

Next: Tags

Search "Lambdabasic"
Select "AWSLambdaBasicExecutionRole"
Click "Next"

Create role



Add tags (optional)

IAM tags are key-value pairs you can add to your role. Tags can include user information, such as an email address, or can be descriptive, such as a job title. You can use the tags to organize, track, or control access for this role. [Learn more](#)

Key	Value (optional)	Remove
<input type="text" value="Add new key"/>	<input type="text"/>	

You can add 50 more tags.

Click "Next"



Cancel

Previous

Next: Review

Create role



Review

Provide the required information below and review this role before you create it.

Role name*

lambda_basic_execution

Use alphanumeric and '+,=, @, - _' characters. Maximum 64 characters.

Enter Role name
"lambda_basic_execution"
Click "Create role"

Role description

Allows Lambda functions to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and '+,=, @, - _' characters.

Trusted entities AWS service: lambda.amazonaws.com

Policies  [AWSLambdaBasicExecutionRole](#) 

Permissions boundary Permissions boundary is not set

* Required

[Cancel](#)

[Previous](#)

[Create role](#)

AWS Educate

After successful creation of the role, you will see it in the list of the roles available for you.

Head back to your lambda create function and refresh

Showing 14 results

Role name ▼	Description	
<input type="checkbox"/> AWSServiceRoleForAWSC...		
<input type="checkbox"/> AWSServiceRoleForCloud...		AWS service: events (Service-Linked role)
<input type="checkbox"/> AWSServiceRoleForElasti...		AWS service: elasticache (Service-Linked role)
<input type="checkbox"/> AWSServiceRoleForOrgani...	Service-linked role used by AWS Organizations to enabl...	AWS service: organizations (Service-Linked r...
<input type="checkbox"/> AWSServiceRoleForSupport	Enables resource access for AWS to provide billing, ad...	AWS service: support (Service-Linked role)
<input type="checkbox"/> AWSServiceRoleForTruste...	Access for the AWS Trusted Advisor Service to help red...	AWS service: trustedadvisor (Service-Linked ...
<input type="checkbox"/> EMR_AutoScaling_Default...		AWS service: application-autoscaling and 1 more
<input type="checkbox"/> EMR_DefaultRole		AWS service: elasticmapreduce
<input type="checkbox"/> EMR_EC2_DefaultRole		AWS service: ec2
<input type="checkbox"/> lambda_basic_execution	Allows Lambda functions to call AWS services on your b...	AWS service: lambda
<input type="checkbox"/> robomaker_students		AWS service: robomaker

AWS Educate

Basic information

Function name

Enter a name that describes the purpose of your function.

hello

Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime [Info](#)

Choose the language to use to write your function.

Python 3.6

Permissions [Info](#)

Lambda will create an execution role with permission to upload logs to Amazon CloudWatch Logs. You can configure and modify permissions further.

▼ Choose or create an execution role

Execution role

Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

Use an existing role

Existing role

Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.

lambda_basic_execution

[View the lambda_basic_execution role](#) on the IAM console.

Cancel

Create function

lambda create function page -

Hit refresh

Select "use an existing role"

Select the role you just created from the dropdown

Click "create function"

AWS Educate

The screenshot shows the AWS Lambda console interface. At the top, there's a header with the function name 'hello' and several buttons: 'Throttle', 'Qualifiers' (with a dropdown arrow), 'Actions' (with a dropdown arrow), a search box containing 'hello', and 'Test' and 'Save' buttons. Below the header, there are two tabs: 'Configuration' (active) and 'Monitoring'. The main content area is titled 'Designer' and contains a left sidebar with 'Add triggers' and a list of trigger types: API Gateway, AWS IoT, CloudWatch Events, CloudWatch Logs, CodeCommit, and Cognito Sync Trigger. The main workspace shows a key icon, a blue box labeled 'hello' with a red arrow pointing to it, and two dashed boxes with instructions: 'Add triggers from the list on the left' and 'Resources the function's role has access to will be shown here'.

hello

Throttle Qualifiers Actions hello Test Save

Configuration Monitoring

Click on the function you just created then roll down

▼ Designer

Add triggers
Click on a trigger from the list below to add it to your function.

API Gateway

AWS IoT

CloudWatch Events

CloudWatch Logs

CodeCommit

Cognito Sync Trigger

hello

Add triggers from the list on the left

Resources the function's role has access to will be shown here

AWS Educate

hello

Throttle

Qualifiers ▼

Actions ▼

Select a test event.. ▼

Test

Save

File Edit Find View Goto Tools Window

Environment

New File Alt-N

New From Template ▶

Open Recent ▶

Save Ctrl-S

Save As... Ctrl-Shift-S

Save All

Line Endings ▶

Close File Alt-W

Close All Files Alt-Shift-W

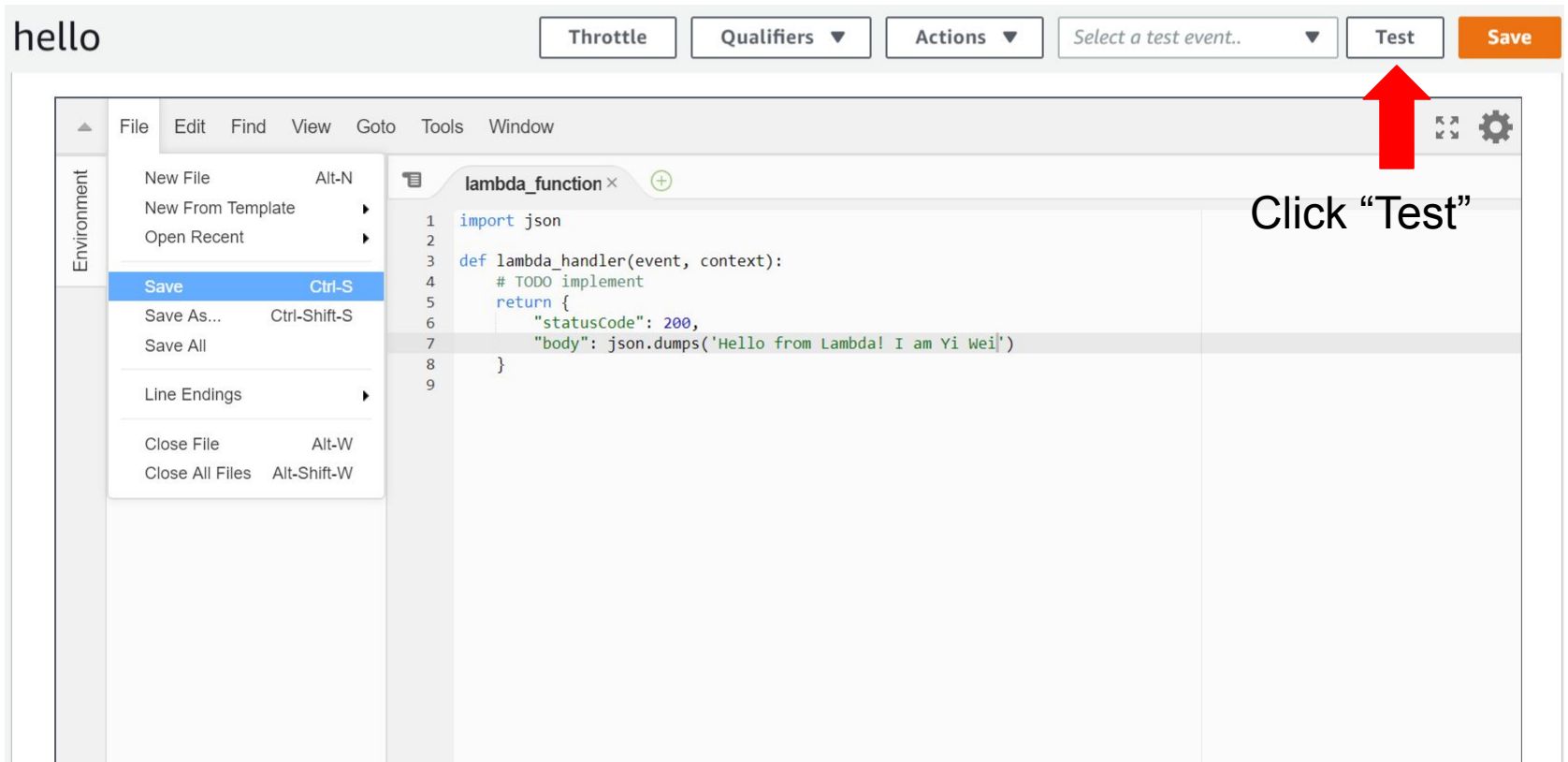
lambda_function ×

```
1 import json
2
3 def lambda_handler(event, context):
4     # TODO implement
5     return {
6         "statusCode": 200,
7         "body": json.dumps('Hello from Lambda! I am Yi Wei')
8     }
9
```

Click "Save"

Change the template codes to anything you want

AWS Educate



Configure test event

A function can have up to 10 test events. The events are persisted so you can switch to another computer or web browser and test your function with the same events.

☒ Create new test event
☐ Edit saved test events

Event template
Hello World

Event name
Test

```
1 {  
2   "key3": "value3",  
3   "key2": "value2",  
4   "key1": "value1"  
5 }
```

Cancel Create

Name your test event

Create the event

Lambda > Functions > hello

ARN - arn:aws:lambda:ap-southeast-1:026800816426:function:hello

hello

Throttle Qualifiers Actions Test Save

✓ Execution result: succeeded (logs) ×

▼ Details

The area below shows the result returned by your function execution.

```
{
  "statusCode": 200,
  "body": "\"Hello from Lambda! I am Yi Wei\""
}
```

Summary

Code SHA-256	Request ID
r2cTUhSVbSVqprvJj6mu2Cc02cOO1kCMEJ3et1nSLqk=	7045de61-b59d-11e8-8429-fbadf7a4abdc
Duration	Billed duration
0.31 ms	100 ms
Resources configured	Max memory used
128 MB	21 MB

The screenshot shows the AWS Lambda console's 'Designer' tab for a function named 'myFunction'. On the left, there is a 'View permissions' button and a card for 'API Gateway' with a '+ Add trigger' button. A red arrow points to this button. To the right of the 'API Gateway' card is a box for 'myFunction' showing 'Unsaved changes' and 'Layers (0)'. Further right is a dashed box labeled 'Resources that the function's role has access to appear here'. Below the console interface, a text overlay reads 'Click "Add trigger"'. At the bottom of the console, the 'API Gateway' section shows 'myFunction-API' with its ARN, API endpoint, and API name. It also includes 'Enabled' and 'Delete' buttons.

▼ Designer

View permissions

myFunction
Unsaved changes
Layers (0)

API Gateway

+ Add trigger

Resources that the function's role has access to appear here

Click "Add trigger"

API Gateway

myFunction-API
arn:aws:execute-api:us-east-1:141078800106:ng1pvi964e/*/*/*myFunction

▶ API: api-gateway/ng1pvi964e/*/*/*myFunction API endpoint: <https://ng1pvi964e.execute-api.us-east-1.amazonaws.com/default/myFunction> API name: myFunction-API

Enabled Delete

AWS Educate

Lambda > Add trigger

Search

Create a new API

Existing APIs

- ipynbRunner
- fiveQuestionsHtmlActivity
- functionChecker
- fiveQuestionsHtmlActivity
- fiveQuestionsHtmlActivity
- javascriptTester
- doctestCustomActivity-API
- /

Lambda will add the necessary permissions for Amazon API Gateway to invoke your Lambda function from this trigger.
[Learn more](#) about the Lambda permissions model.

Cancel

Add

1. In 'Trigger Configuration', select API Gateway > Create a new API.
2. Set 'Security' to 'Open'
3. Click Add

AWS Educate

The screenshot shows the AWS Lambda console interface for a function named "hello". The top navigation bar includes buttons for "Throttle", "Qualifiers", "Actions", "Test", and "Save". The "Save" button is highlighted with a red arrow. On the left, a list of triggers is visible: "AWS IoT", "CloudWatch Events", "CloudWatch Logs", "CodeCommit", and "Cognito Sync Trigger". The "API Gateway" trigger is selected, and a blue box indicates "Unsaved changes". Below the trigger list, a message states "Resources the function's role has access to will be shown here". The main content area shows the "API Gateway" configuration for "New trigger 1", with a "Delete" button. A blue box at the bottom indicates "Unsaved changes" for the API configuration, which includes the API name "hello-API" and security settings "NONE".

hello

Throttle Qualifiers Actions Test Test Save

API Gateway

Unsaved changes

Add triggers from the list on the left

Resources the function's role has access to will be shown here

API Gateway

New trigger 1 Delete

Unsaved changes

API: \$CREATE API name: hello-API Security: NONE

AWS Educate

The screenshot shows the AWS Lambda console configuration for a function named "hello". The "API Gateway" trigger is selected and saved. The "API Gateway" section below shows the "hello-API" endpoint with a red arrow pointing to the URL.

hello

Throttle Qualifiers Actions Test Test Save

API Gateway
AWS IoT
CloudWatch Events
CloudWatch Logs
CodeCommit
Cognito Sync Trigger

API Gateway Saved

Add triggers from the list on the left

Resources the function's role has access to will be shown here

API Gateway

hello-API
arn:aws:execute-api:southeast-1:026800816426:aintfm3no0/*/*/*hello

API: api-gateway/aintfm3no0/*/*/*hello API endpoint: <https://aintfm3no0.execute-api.ap-southeast-1.amazonaws.com/default/hello> API name: hello-API

Enabled Delete

Click this link then you will see your message!

Jupyter Lambda Function Exercise

1. Create a copy of the Colab notebook. ([link](#))
2. Follow the directions to create the requested function.
3. Optional: create a few tests to test that your new function works properly.

queryParameters

`https://YOUR_URL/hello?user=Prof`

You can pass in queryParameters to your function by including a **?** at the end of your public url. The url above passes in the queryParameter **user** and sets it to the string **Prof**.

You can separate multiple queryParameters with the **&** symbol.

https://lvcsr9uob7.execute-api.ap-southeast-1.amazonaws.com/default/test_function_2?message=hello&user=chris

Deployed Lambda Function Exercise

1. Submit a link to the public API for your deployed lambda function.

https://lvcsr9uob7.execute-api.ap-southeast-1.amazonaws.com/default/test_function_2?user=chris

Jupyter Lambda Function details 35/38 Deadline in 7 days	Submit a link to your public Lambda Function API 5/38 Deadline in 7 days
Completed	Completed
Completed	Completed
Completed	Completed
Completed	Completed
Completed	Completed
Completed	