

SEOUL

19.09.26

# DEV DAY



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모두를 위한 컴퓨터 비전 딥러닝 툴킷, GluonCV 따라하기

## 3. AWS DeepLens

김무현 데이터 사이언티스트  
Amazon Machine Learning Solutions Lab



AWS DeepLens  
is not a  
video camera ...

It's the  
world's first  
**deep learning-enabled  
developer kit**



# AWS DeepLens Specifications



- Intel Atom Processor
- Gen9 graphics
- Ubuntu OS- 16.04 LTS
- 100 GFLOPS performance
- Dual band Wi-Fi
- 8-GB RAM
- 16-GB storage (eMMC)
- 32-GB SD card
- 4 MP camera with MJPEG
- H.264 encoding at 1080p resolution
- 2 USB ports
- Micro HDMI
- Audio out
- AWS Greengrass preconfigured
- Intel cLDNN Optimized for MXNet

# Get Started with Sample Projects

HOT DOG / NOT HOT DOG



OBJECT DETECTION



FACE DETECTION



ACTIVITY DETECTION



HEAD POSE DETECTION



ARTISTIC STYLE TRANSFER



CAT VS. DOG



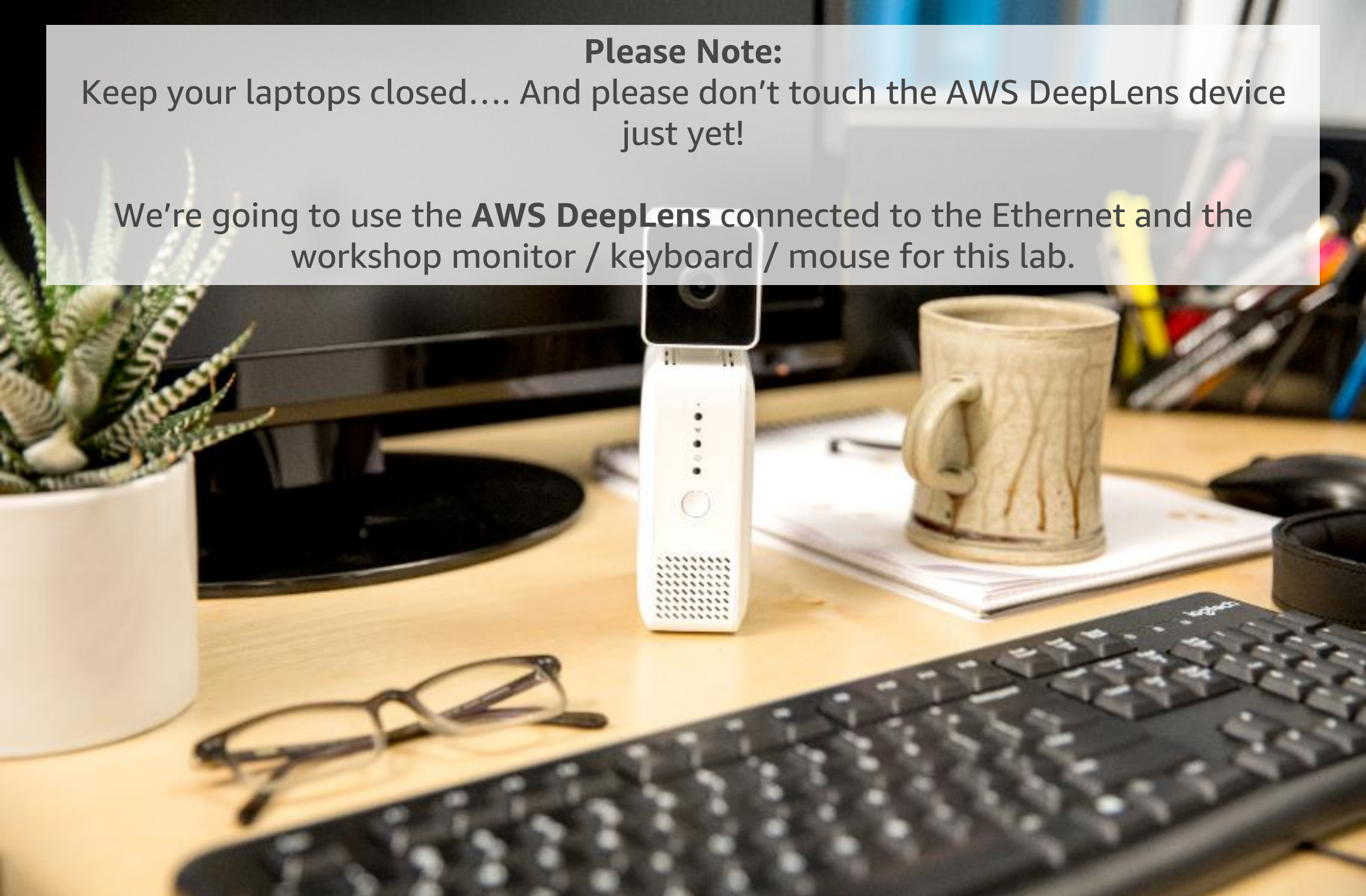
Or build custom deep learning models in the cloud using  
**Amazon SageMaker**



**Please Note:**

Keep your laptops closed.... And please don't touch the AWS DeepLens device just yet!

We're going to use the **AWS DeepLens** connected to the Ethernet and the workshop monitor / keyboard / mouse for this lab.



## 2. Deploying an out-of-box model to AWS DeepLens

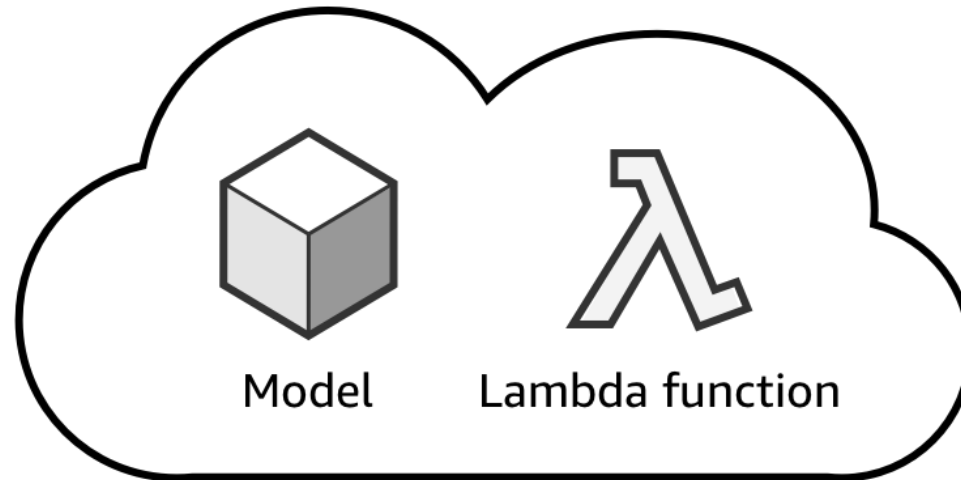


# Under the Covers – Console

AWS DeepLens



Create project / Deploy project



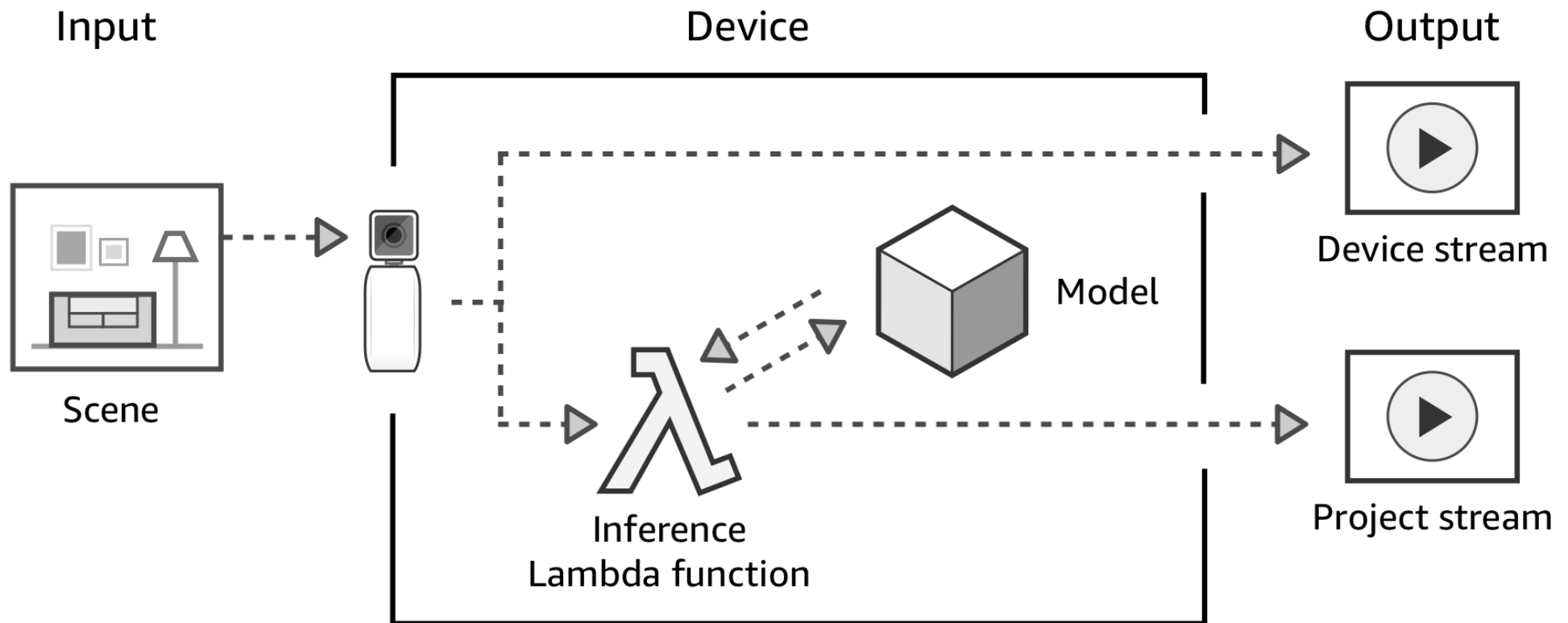
Device



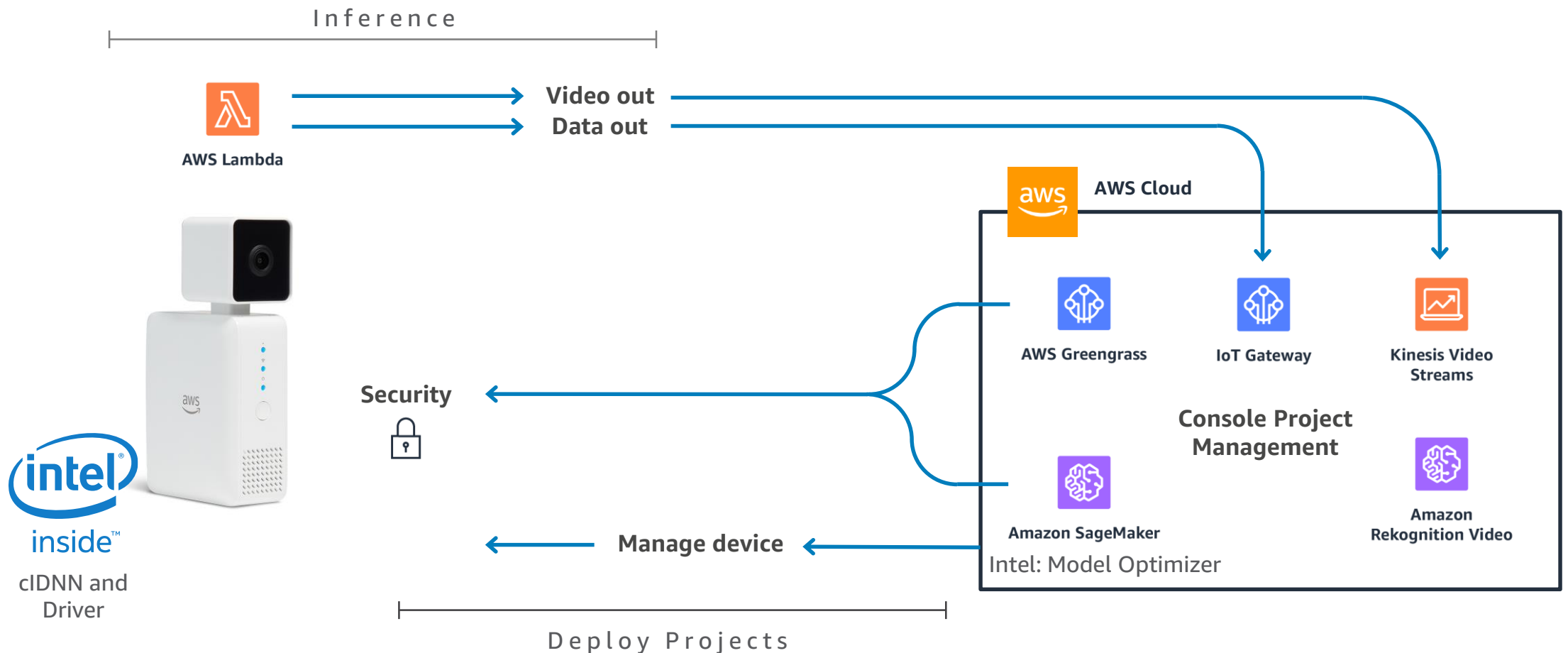
Deploy



# Under the Covers – Device

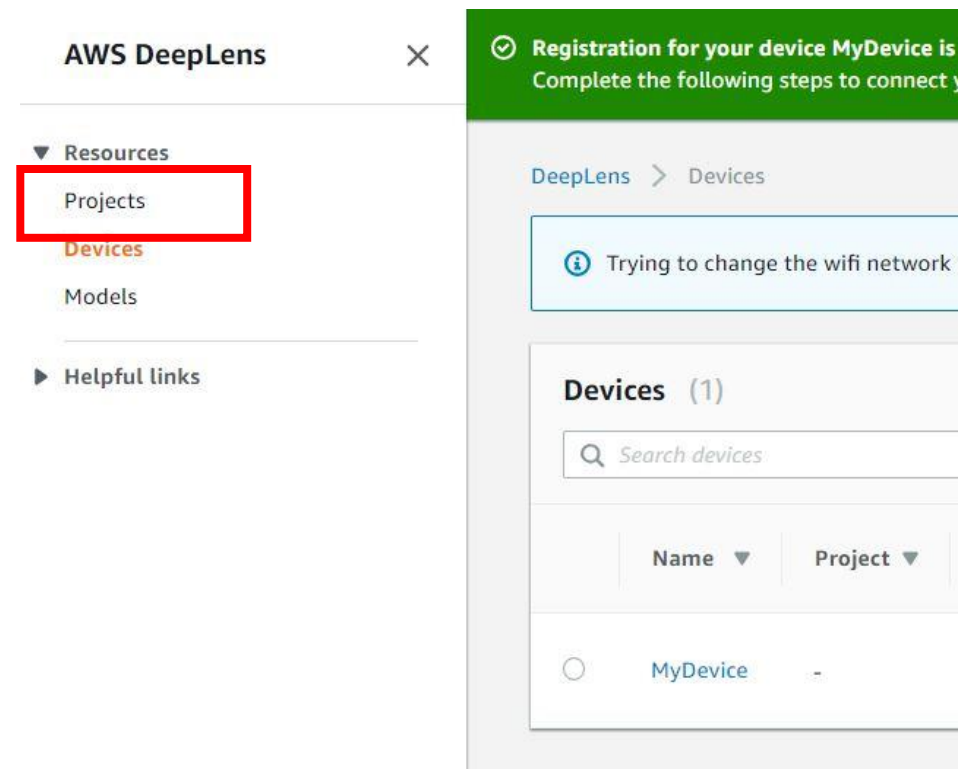


# AWS DeepLens Architecture



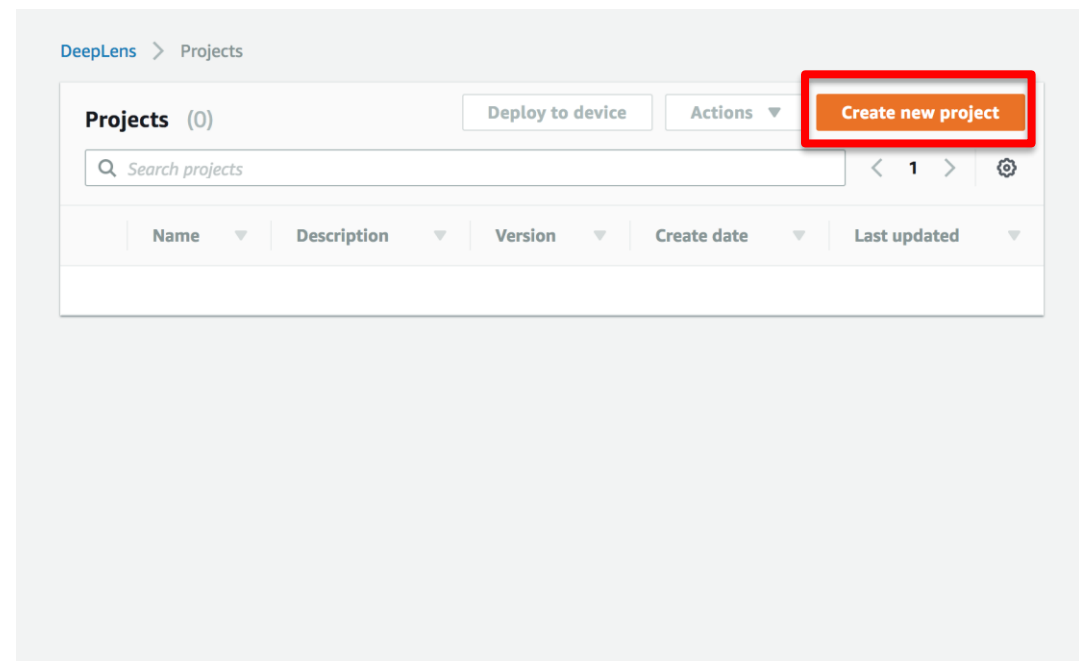
# Now, It's Time to Create a Project

1. From the left navigation bar, choose **Projects**.



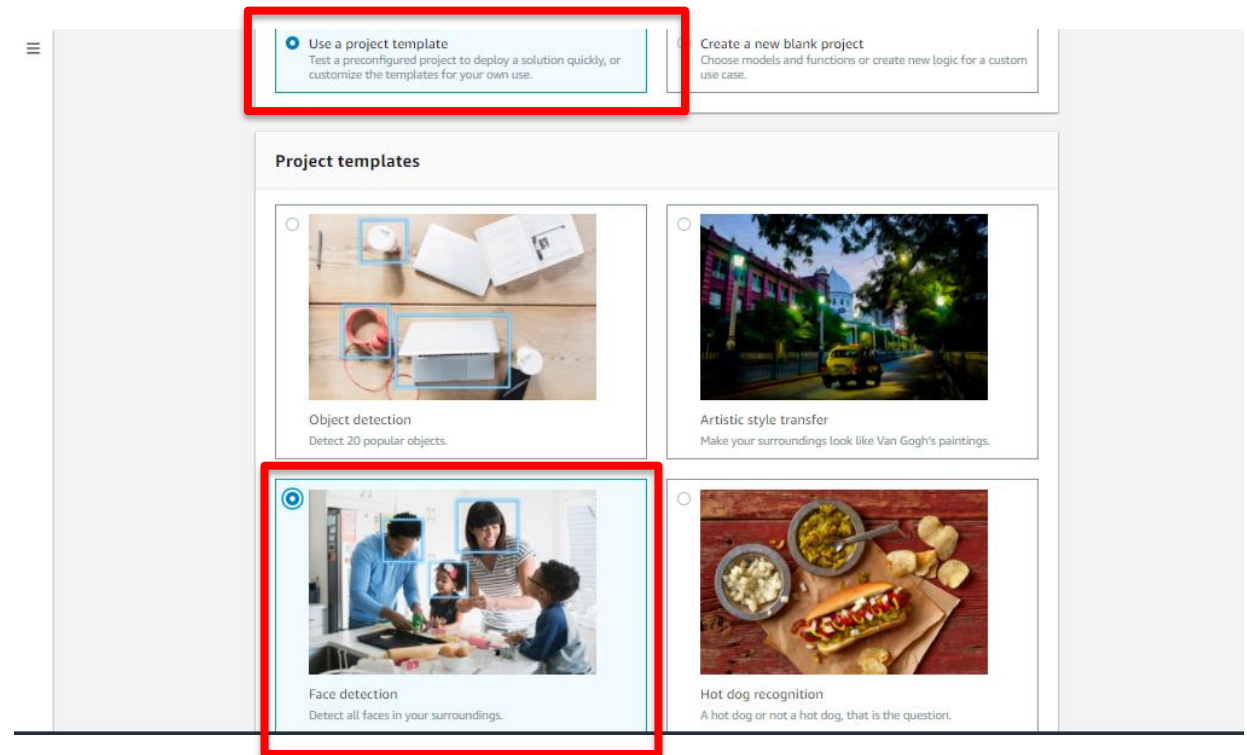
# Now, It's Time to Create a Project

1. Choose **Create new project**.



# Use a Face Detection Sample

3. Choose **Use a project template**.
4. Choose **Face detection** from sample project templates.
5. Choose **Next** at the bottom of screen.

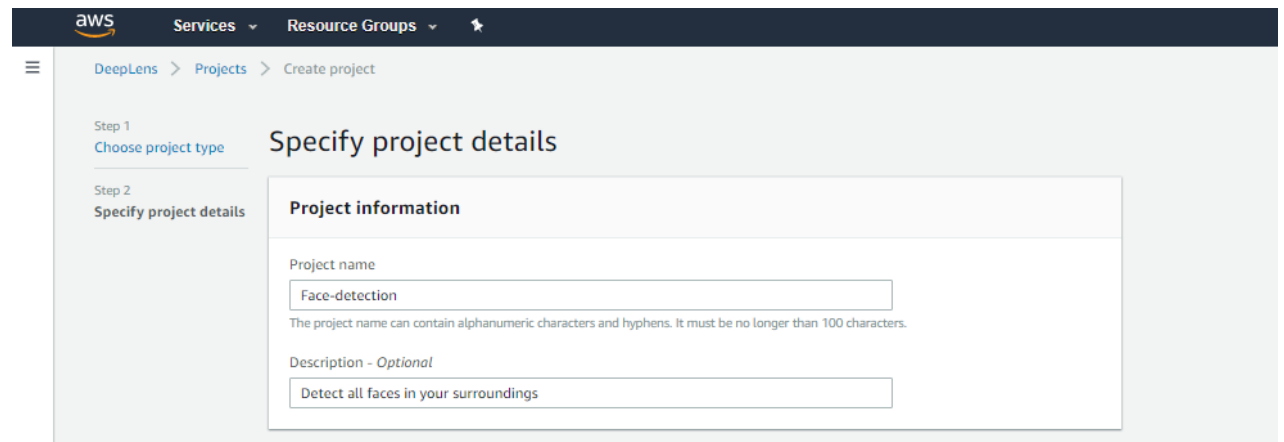




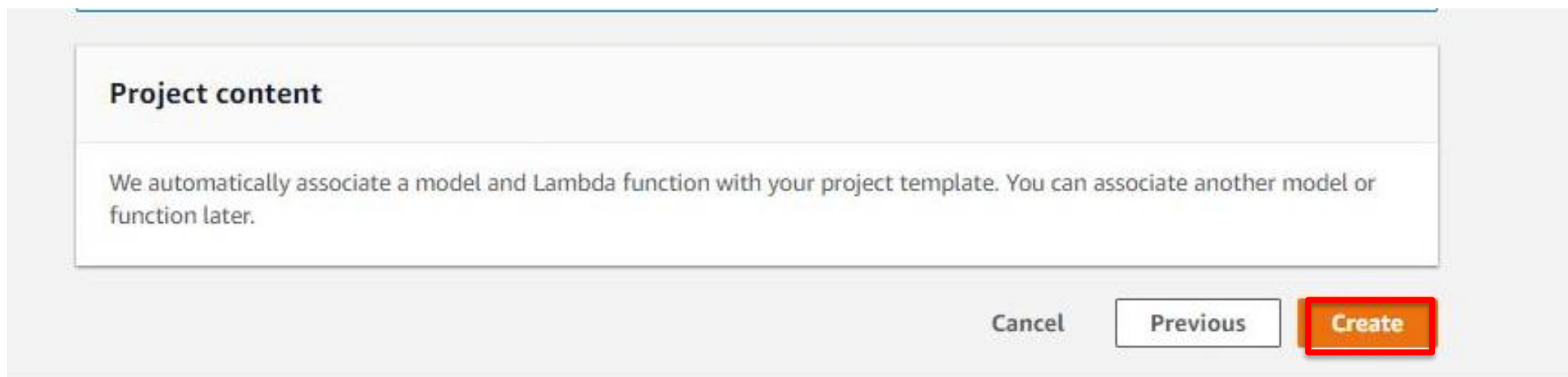
# Create a Project

## 6. Choose **Create**.

It will take a few minutes to create the project.



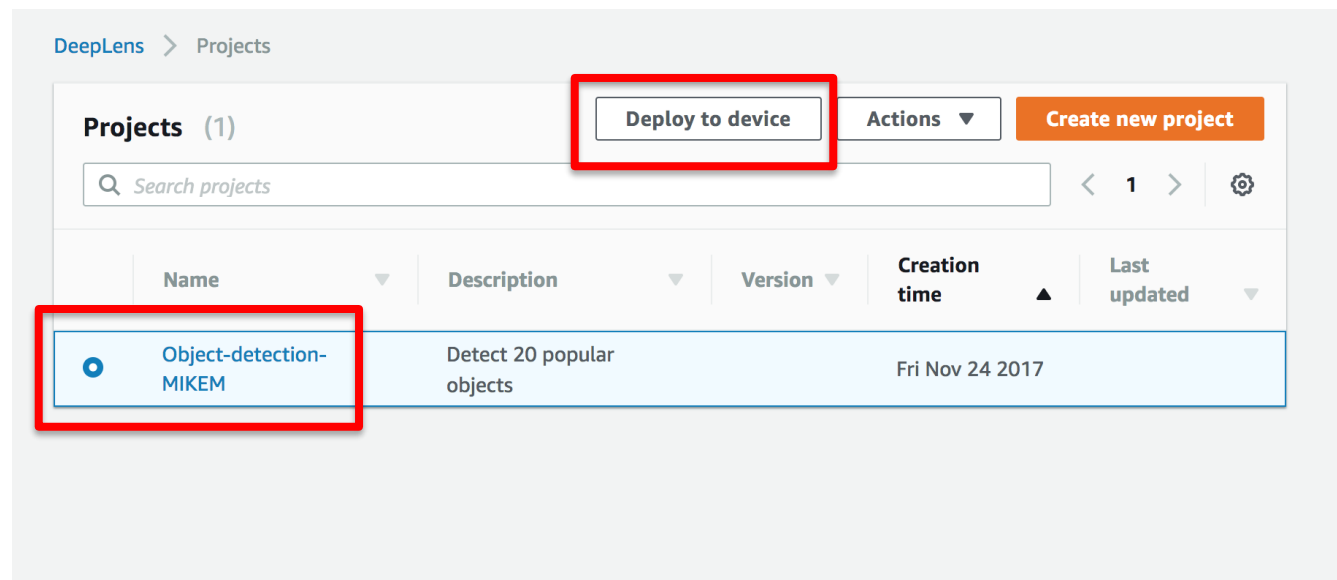
The screenshot shows the AWS DeepLens console interface. At the top, there's a navigation bar with 'aws', 'Services', and 'Resource Groups'. Below it, a breadcrumb trail reads 'DeepLens > Projects > Create project'. On the left, a sidebar indicates 'Step 1: Choose project type' and 'Step 2: Specify project details'. The main area is titled 'Specify project details' and contains a 'Project information' section. This section has two input fields: 'Project name' with the value 'Face-detection' and a description 'The project name can contain alphanumeric characters and hyphens. It must be no longer than 100 characters.', and 'Description - Optional' with the value 'Detect all faces in your surroundings'.



This screenshot shows the 'Project content' section of the AWS DeepLens console. It features a heading 'Project content' and a text block stating: 'We automatically associate a model and Lambda function with your project template. You can associate another model or function later.' At the bottom right, there are three buttons: 'Cancel', 'Previous', and 'Create'. The 'Create' button is highlighted with a red border and a red shadow, indicating it is the next step.

# Deploy Project to the Device

7. Find your project in the list (the one you just named).
8. Choose the radio button.
9. Choose **Deploy to device**.



# Target Your Device

10. Select your device.

11. Choose **Review**.

### Target device

Choose the device you want to deploy your project to.

Devices (1)

< 1 > ⚙

Name ▼	Project ▼	Registration status ▼	Creation time ▲
<input checked="" type="radio"/> milleK9TB	-	✓ Completed	Fri Nov 24 2017

CancelReview

# Deploy!

## 12. Choose **Deploy**.

A note on costs ...

**Review and deploy**

**Deployment check**

AWS DeepLens will deploy the project below to your device. Choose Deploy to continue.

New project: Object-detection-MIKEM

Type	Name
Lambda	[arn:aws:lambda:us-east-1:742969847900:function:deeplens-object-detection:1]
Model	deeplens-object-detection

**Deployment will incur costs**  
AWS DeepLens uses various services to help deploy a project to your device. Costs will be aggregated and itemized for review in AWS Billing. [Learn more](#)

Cancel Previous **Deploy**

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# Wait for the Project to Be Deployed

Blue banner = Deployment in progress

🔄 **Deployment of project Artistic-style-transfer, version 1.0 is in progress.**  
Waiting for deployment workflow to begin.

Green banner = Deployment successful

✅ **Deployment of project Artistic-style-transfer, version 1.0 succeeded.**  
Click on "View project stream" for instructions on how to view the filtered or transformed AWS DeepLens output.



# Let's View the Output

You can view the output over the terminal or on the browser.  
For the workshop, we will view the output over terminal

1. Open Terminal on Ubuntu desktop (on the desktop, choose the top left button and search for terminal).
2. Enter the following command:

```
mplayer -demuxer lavf -lavfdopts format=mjpeg:probesize=32 /tmp/results.mjpeg
```



Thank you!

# 여러분의 피드백을 기다립니다!



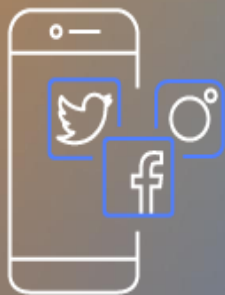
## 강연 평가 및 설문 조사

QR 코드를 통해 AWS DEV DAY SEOUL에 대한 여러분의 의견을 공유해주세요.  
강연 평가 및 설문 조사에 참여해 주신 분께는 등록데스크에서 특별한 기념품을 드립니다.



## 강연 영상

AWS DEV DAY SEOUL 강연 영상은 행사 종료 후 메일로 공유드릴 예정입니다.



## #AWSDEVDAYSEOUL

소셜미디어에 행사 참여 소감을 공유해주세요!

