

# AWS re:Invent

NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

# Design and build modern mobile apps

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# About today's workshop

- 300 level (somewhere between 200 and 300)
- Lots of code, but you can copy and paste
- AWS account for the workshop will be provided

# Before starting the workshop

Please install the **Expo** application on your mobile device

Search Keyword: **expo go**

Android: <https://bit.ly/arc307-android>

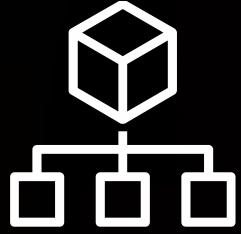
iOS: <https://bit.ly/arc307-ios>

# Modern mobile applications

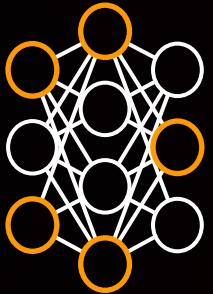


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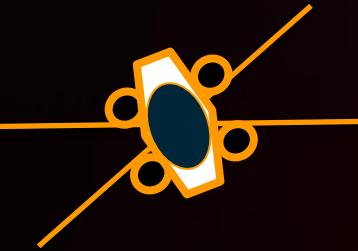
# Modern mobile applications



Shrink scope



Offload  
undifferentiated  
pieces



Right tool  
for the job

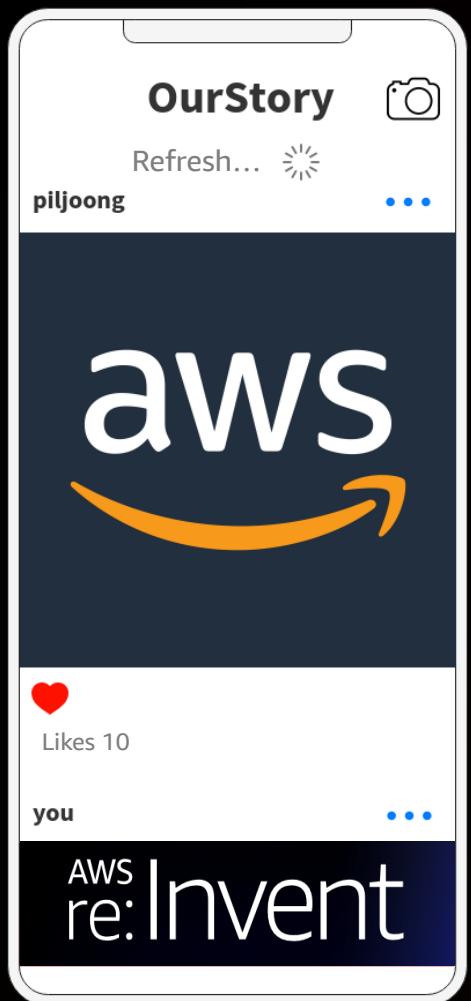


Automate  
everything



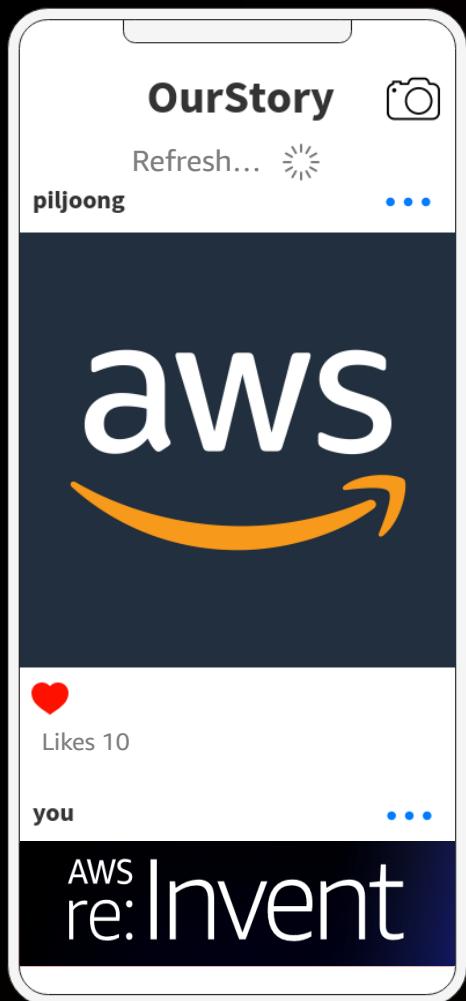
Build and  
ship faster

# OurStory



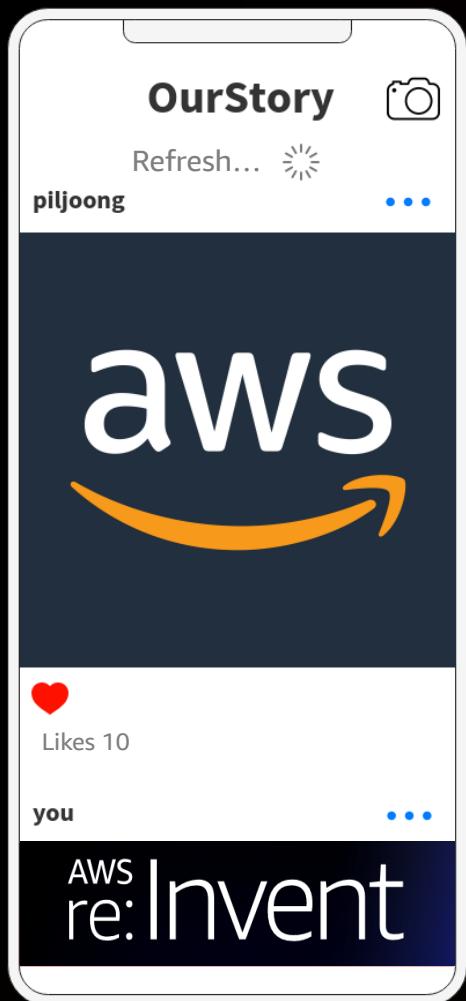
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# OurStory



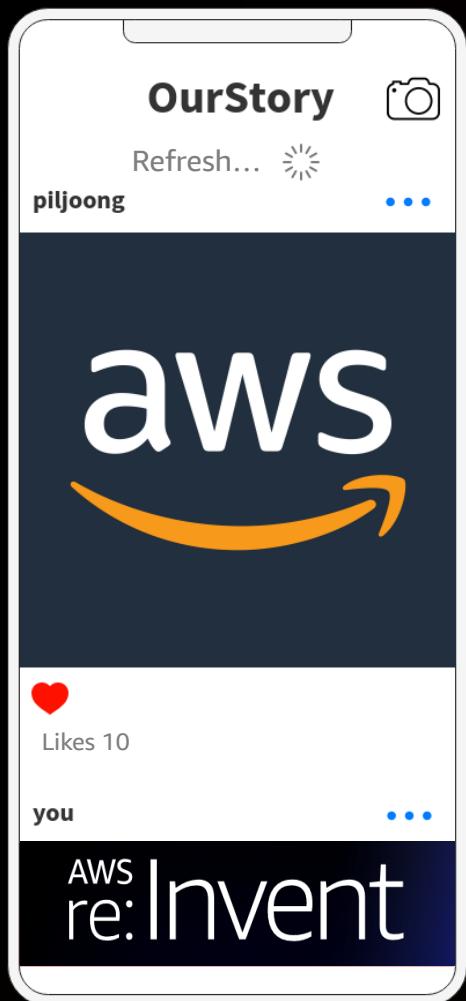
Have you ever posted a photo on social media?

# OurStory



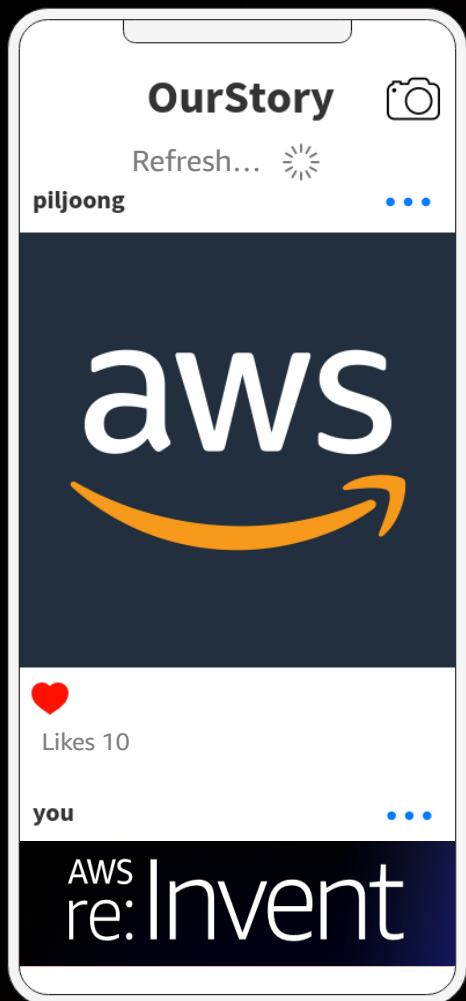
Have you ever posted a photo on social media?  
Now, let's keep our own stories and memories!

# OurStory: Requirements



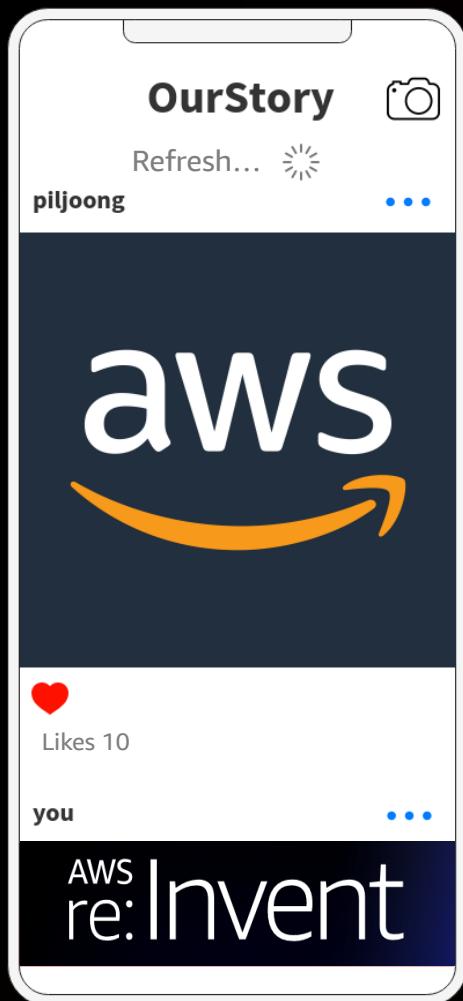
- Mobile (iOS/Android) support
- AuthN/AuthZ
- Post
- Delete
- Like ❤

# OurStory: Design



- Which **VIEWS** should be included?
- What **DATA** does it need?

# OurStory: Design – VIEW



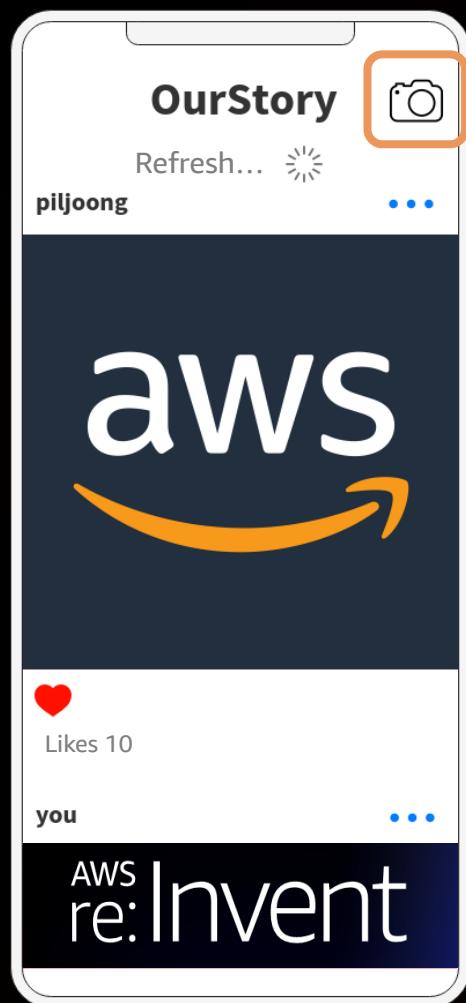
- Which **VIEWs** should be included?

# OurStory: Design – VIEW



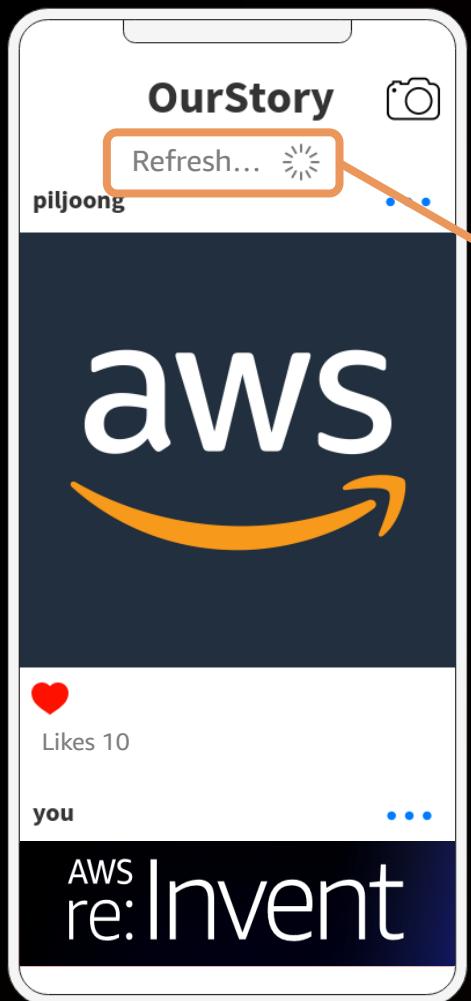
- Which **VIEWs** should be included?
  - ✓ Single view

# OurStory: Design – VIEW



- Which **VIEWs** should be included?
  - ✓ Single view
  - ✓ Camera button

# OurStory: Design – VIEW



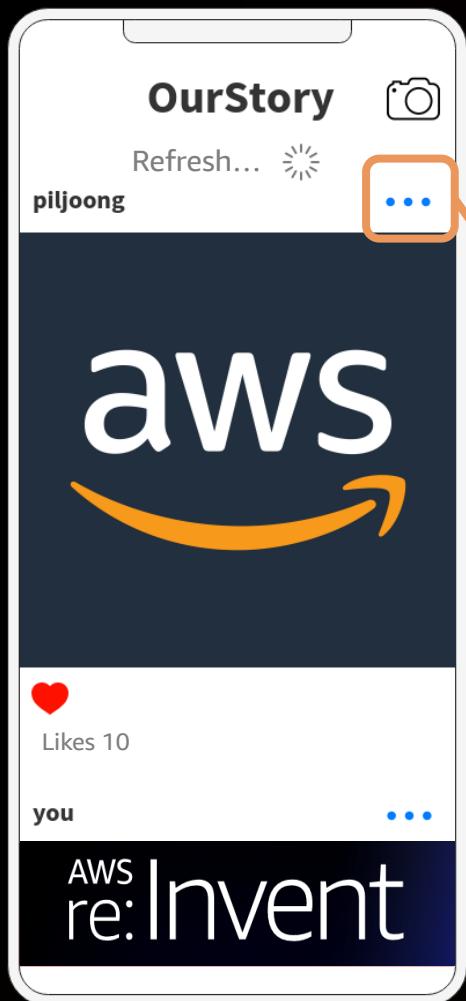
- Which **VIEWs** should be included?
  - ✓ Single view
  - ✓ Camera button
  - ✓ Pull-down refresh

# OurStory: Design – VIEW



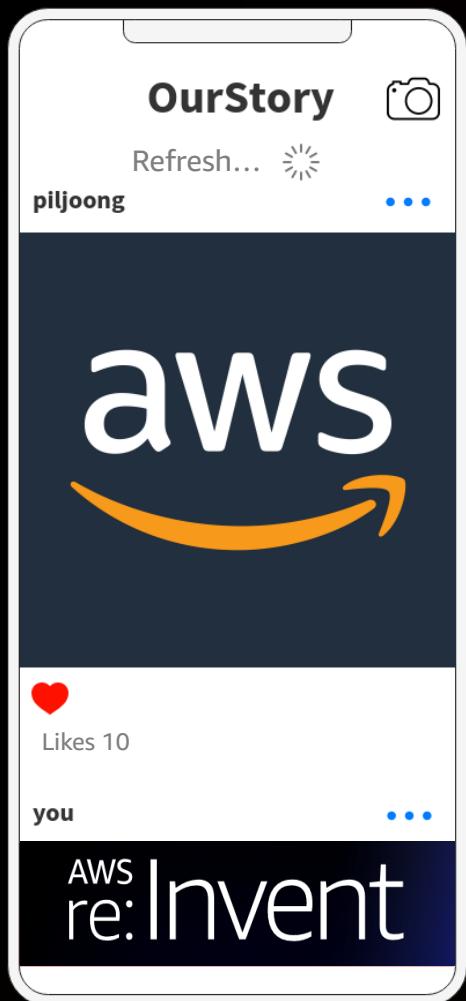
- Which **VIEWs** should be included?
  - ✓ Single view
  - ✓ Camera button
  - ✓ Pull-down refresh
  - ✓ Like ❤ button

# OurStory: Design – VIEW



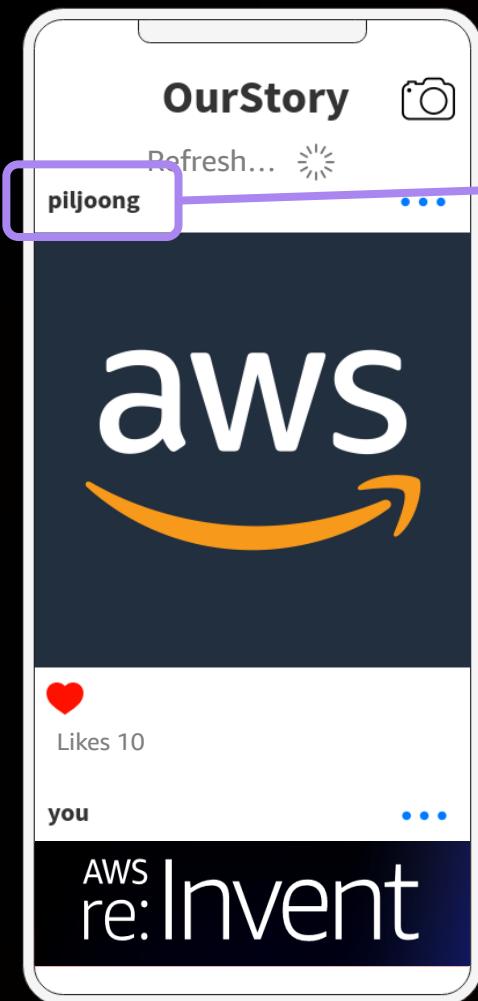
- Which **VIEWs** should be included?
  - ✓ Single view
  - ✓ Camera button
  - ✓ Pull-down refresh
  - ✓ Like ❤ button
  - ✓ Delete via **More** button

# OurStory: Design – DATA



- What **DATA** does it need?

# OurStory: Design – DATA



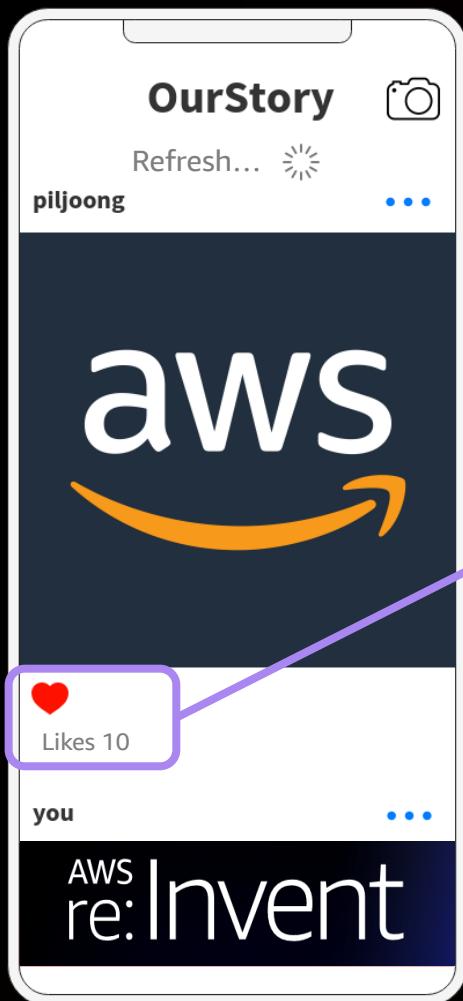
- What **DATA** does it need?
  - ✓ User data

# OurStory: Design – DATA



- What **DATA** does it need?
  - ✓ User data
  - ✓ Posting data

# OurStory: Design – DATA



- What **DATA** does it need?
  - ✓ User data
  - ✓ Posting data
  - ✓ Like ❤ data

# Step-by-step development approach

- Environment setup
- AuthN/AuthZ
- List
- Post
- Delete
- Like ❤

# Step-by-step development approach

- Environment setup
- AuthN/AuthZ
- List
- Post
- Delete
- Like ❤



All of this can be done  
quickly and easily

# Toolchain for quick and easy development

IDE



AWS Cloud9  
IDE

Developer tools,  
libraries, and frameworks

Expo

React Native



AWS Amplify

Backend services



Amazon Cognito



AWS AppSync



Amazon Simple  
Storage Service (S3)



Amazon DynamoDB

# AWS Amplify

DESIGNED FOR THE APP DEVELOPMENT LIFECYCLE

## ENGAGE/MEASURE

- Multi-channel (push/sms/email/voice)
- Behavior-based, location-based, and personalized audience segments
- Engagement performance measurements
- Real-time customer data for immediate optimization

## BUILD

- Open-source libraries
- iOS/Android native
- Javascript/React/Vue/Angular
- UI components
- Escape hatches

## DEPLOY/HOST

- AWS infrastructure
- Ease of deployment with CLI or hosting
- CI/CD capability
- Fully managed global hosting

## TEST

- Device Farm
- Test on real devices
- Test on real browsers
- Integrate testing with CI/CD



# Build feature-rich apps with Amplify libraries

## Authentication

Authentication APIs with prebuilt UI components for your app

## DataStore

On-device persistent storage that automatically synchronizes data between your apps and the cloud.

## API

HTTP requests using REST and GraphQL with support for real-time data

## Analytics

Track user sessions, custom user attributes, and in-app metrics

## PubSub

Connect your app to message-oriented middleware on the cloud

## Predictions

Add MI/ML capabilities to your app, powered by cloud services

## Interactions

Conversational bots powered by deep learning technologies

## Geo

Location-aware features and maps powered by Amazon Location Service

## Push notifications

Push notifications with campaign analytics and targeting

## Storage

Manage user content securely in public, protected, and private storage

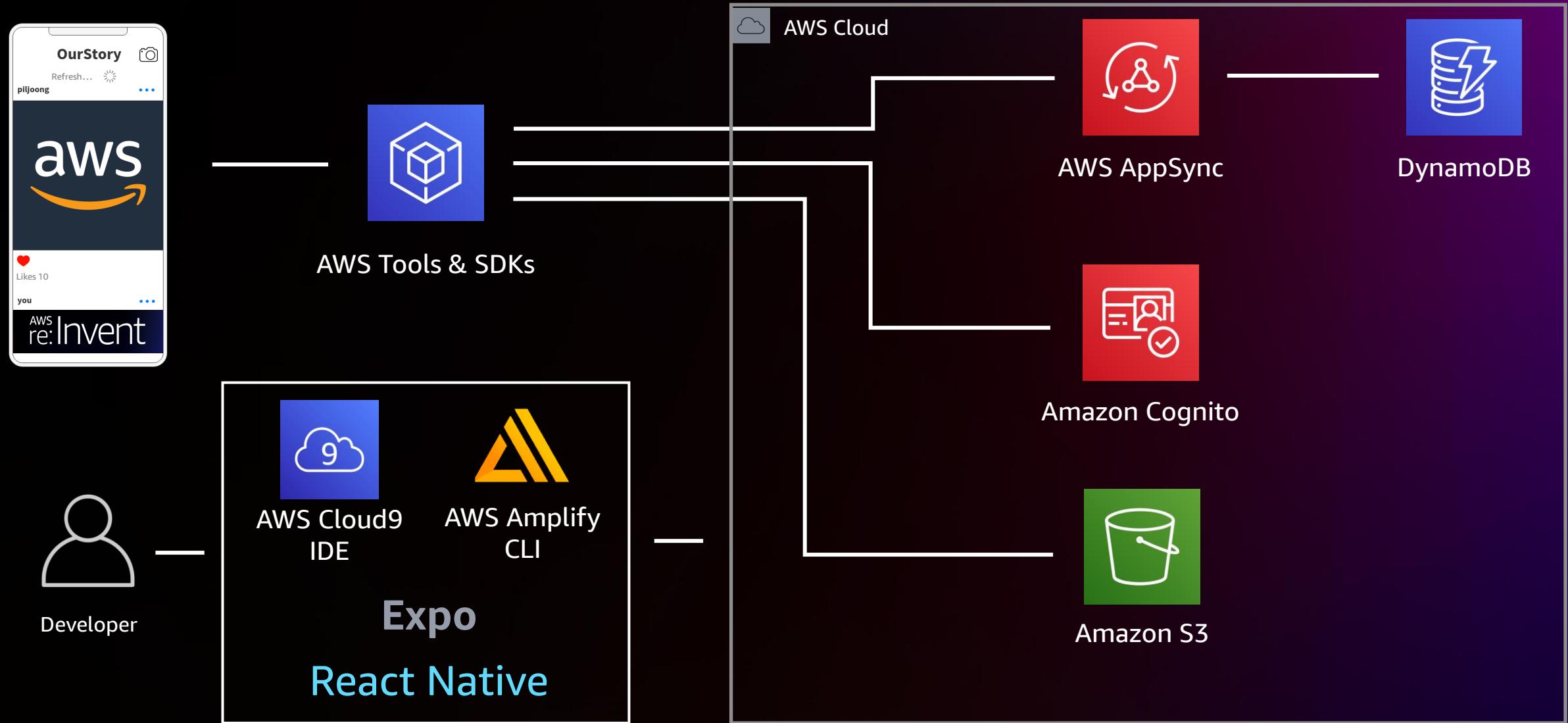
## XR

Work with augmented reality and virtual reality content in your apps

## Extensibility

Extend the power of Amplify with 175+ AWS services

# OurStory: Architecture



# Let's get started!



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# Need help?



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# Lab guide

<https://bit.ly/arc302-workshop>



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# Wrap-up

- Developing modern mobile apps on AWS  
An integrated developer experience
- Amplify Framework  
An open-source client framework, libraries, CLI, and UI components
- Cloud services  
Integration with services such as AWS AppSync, Amazon Cognito via  
CLI Toolchain

# Thank you!

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Please complete the session  
survey in the **mobile app**

