

AWS re:Invent

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

ARC302

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**

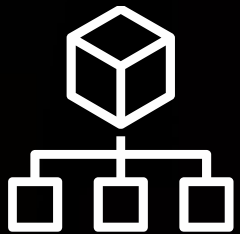
Android: <https://bit.ly/arc307-android>

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

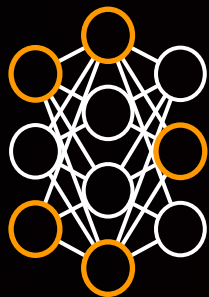
Modern mobile applications



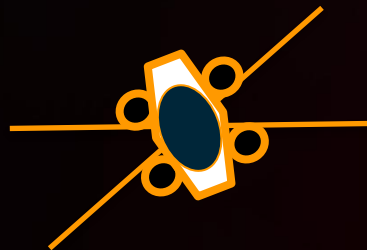
Modern mobile applications



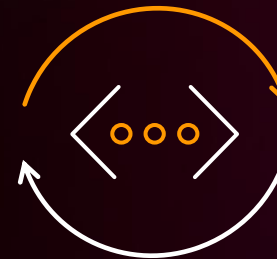
Shrink scope



Offload
undifferentiated
pieces



Right tool
for the job

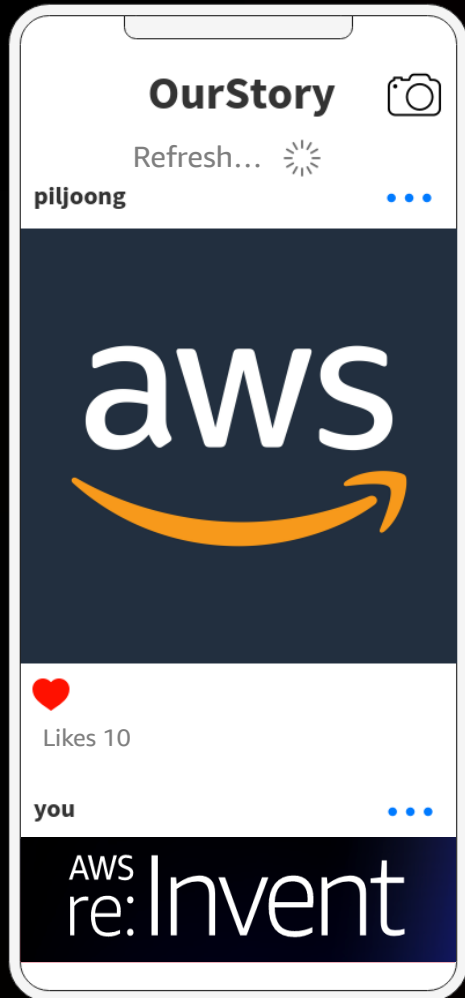


Automate
everything

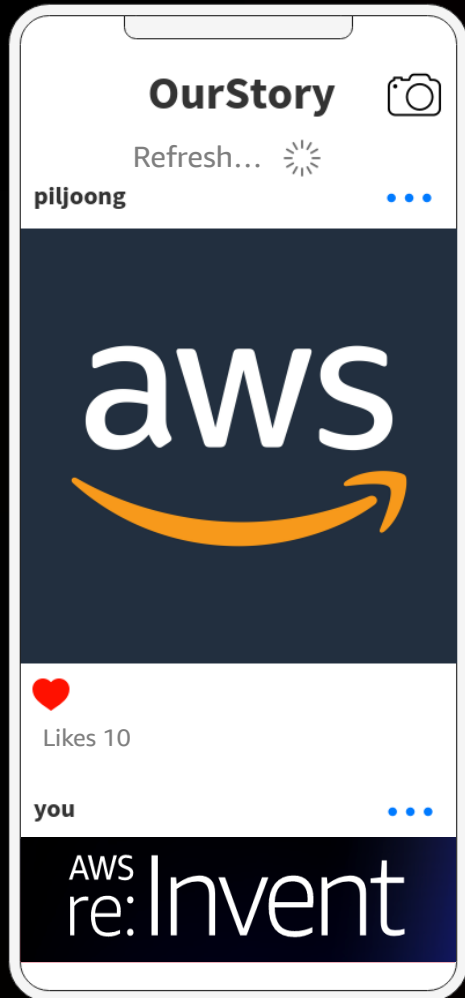


Build and
ship faster

OurStory

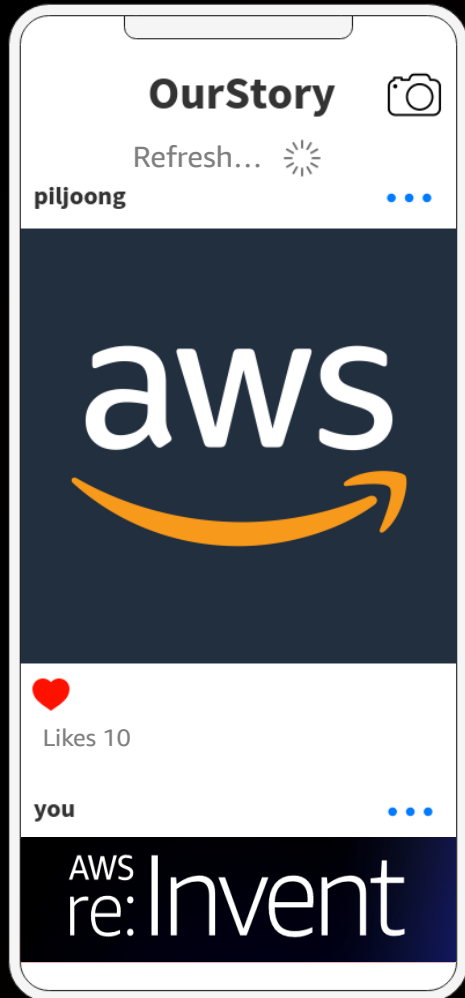


OurStory



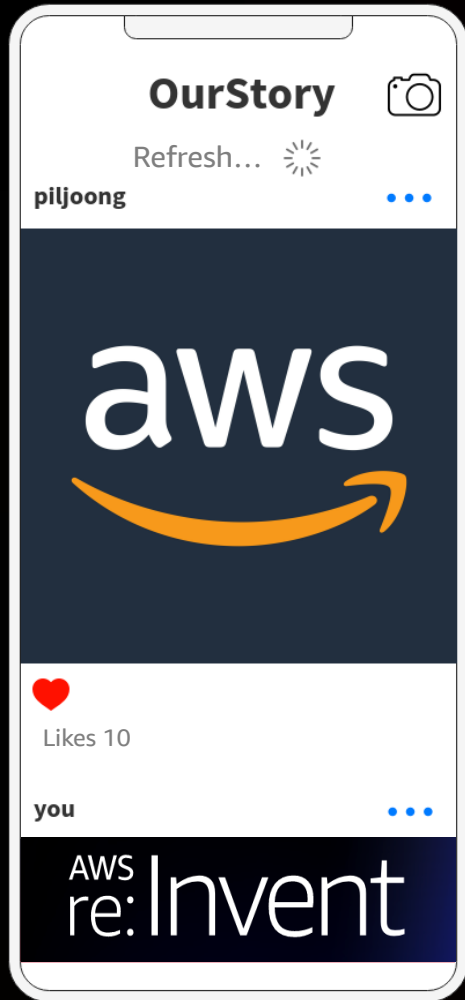
Have you ever posted a photo on social media?

OurStory



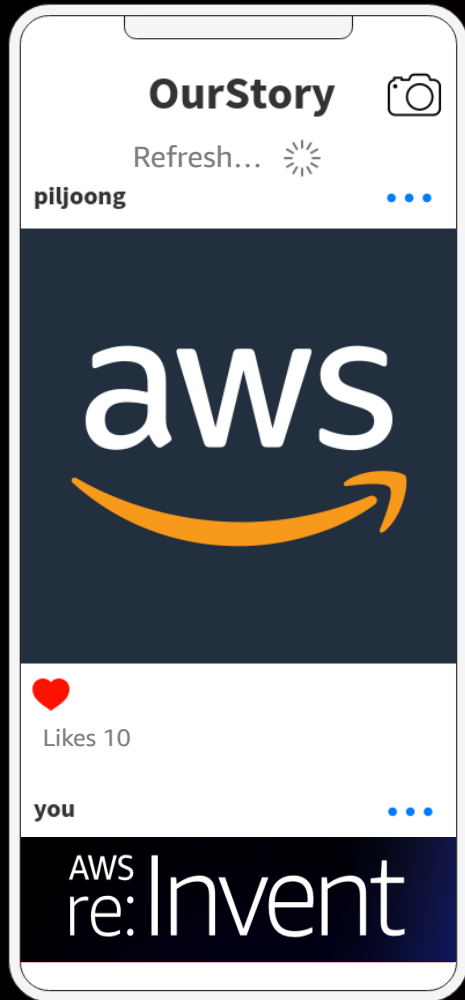
Have you ever posted a photo on social media?
Now, let's keep our own stories and memories!

OurStory: Requirements



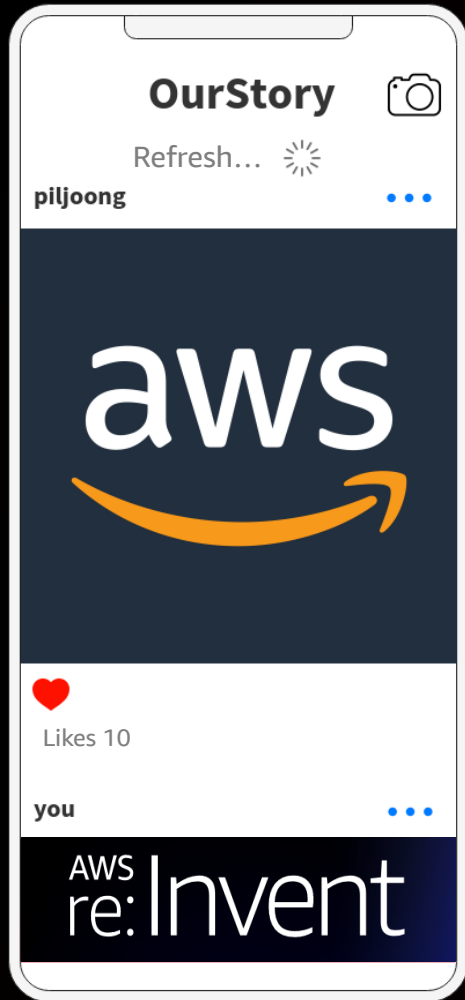
- Mobile (iOS/Android) support
- AuthN/AuthZ
- Post
- Delete
- Like ♥

OurStory: Design



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

OurStory: Design – VIEW



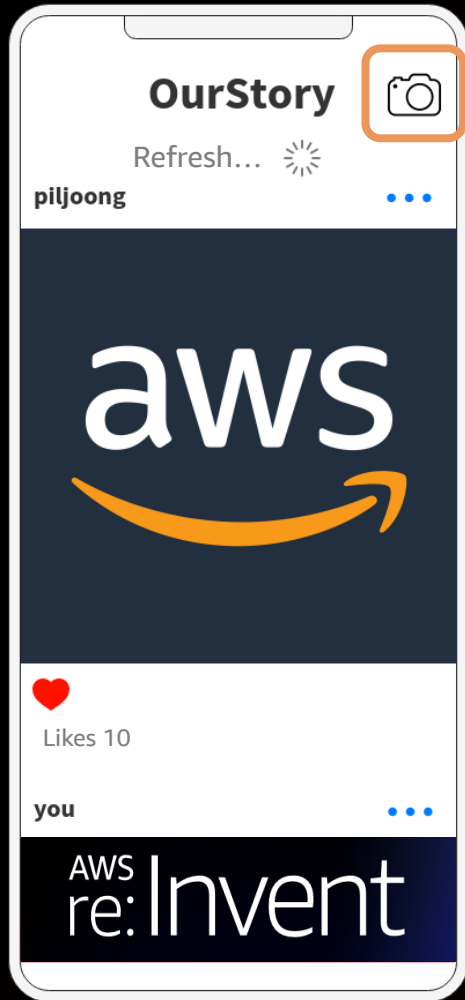
- Which **VIEWs** should be included?

OurStory: Design – VIEW



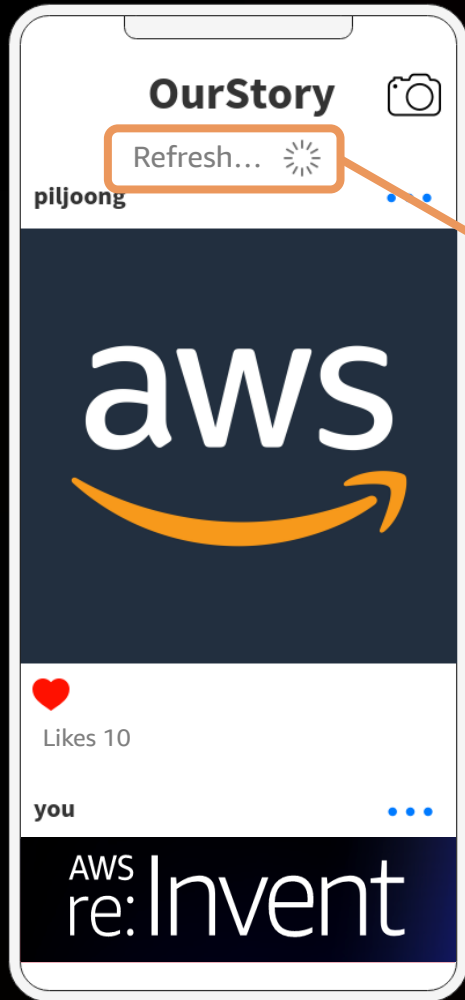
- Which **VIEWs** should be included?
 - ✓ Single view

OurStory: Design – VIEW



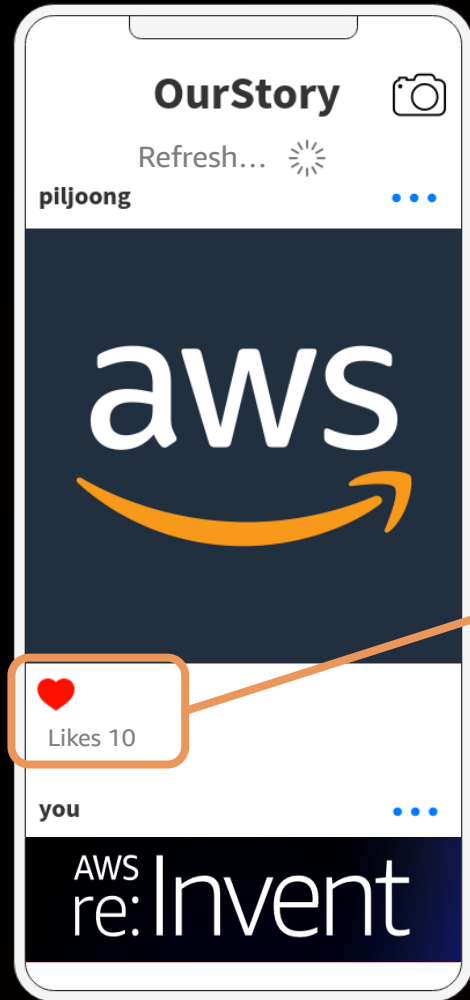
- Which **VIEWs** should be included?
 - ✓ Single view
 - ✓ Camera button

OurStory: Design – VIEW



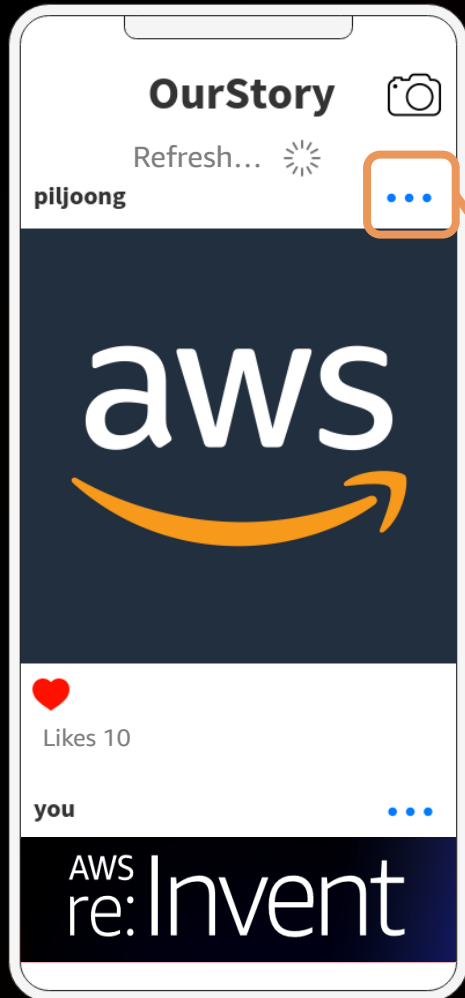
- Which **VIEWs** should be included?
 - ✓ Single view
 - ✓ Camera button
 - ✓ Pull-down refresh

OurStory: Design – VIEW



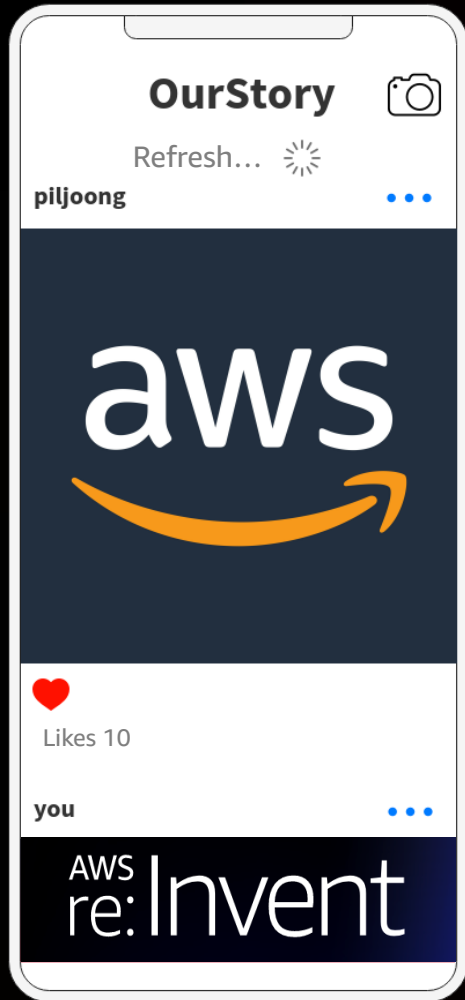
- Which **VIEWs** should be included?
 - ✓ Single view
 - ✓ Camera button
 - ✓ Pull-down refresh
 - ✓ Like ♥ button

OurStory: Design – VIEW



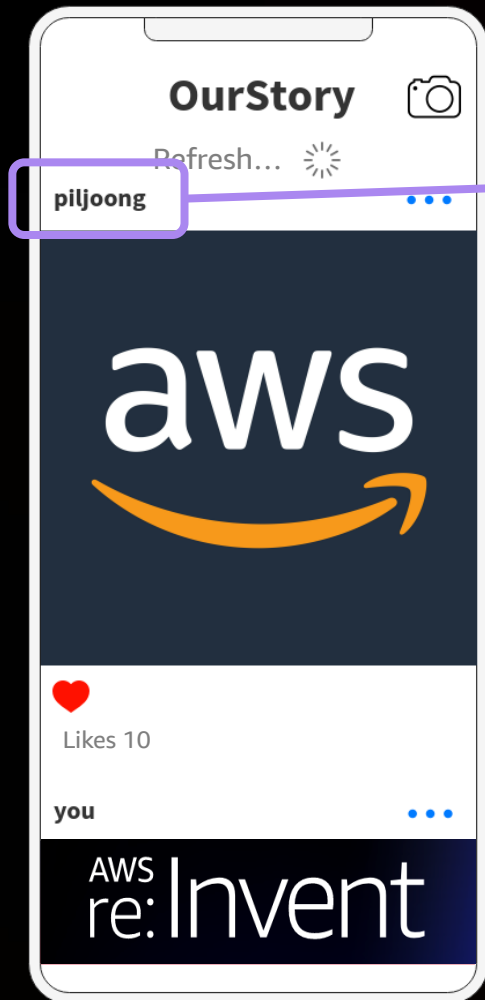
- Which **VIEWs** should be included?
 - ✓ Single view
 - ✓ Camera button
 - ✓ Pull-down refresh
 - ✓ Like ♥ button
 - ✓ Delete via **More** button

OurStory: Design – DATA



- What **DATA** does it need?

OurStory: Design – DATA



- What **DATA** does it need?

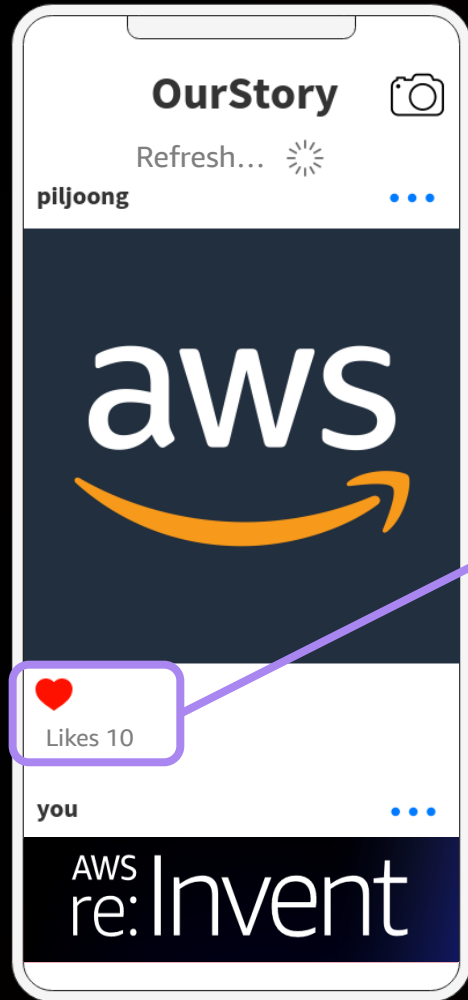
✓ User data

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

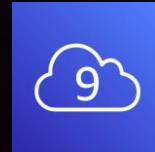
- Environment setup
- AuthN/AuthZ
- List
- Post
- Delete
- Like ♥



All of this can be done
quickly and easily

Toolchain for quick and easy development

IDE



AWS Cloud9
IDE

Developer tools,
libraries, and frameworks

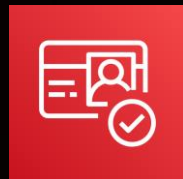
Expo



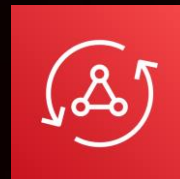
AWS Amplify

React Native

Backend services



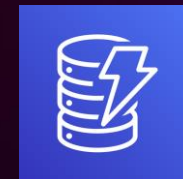
Amazon Cognito



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

DEPLOY/HOST

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



BUILD

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

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 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

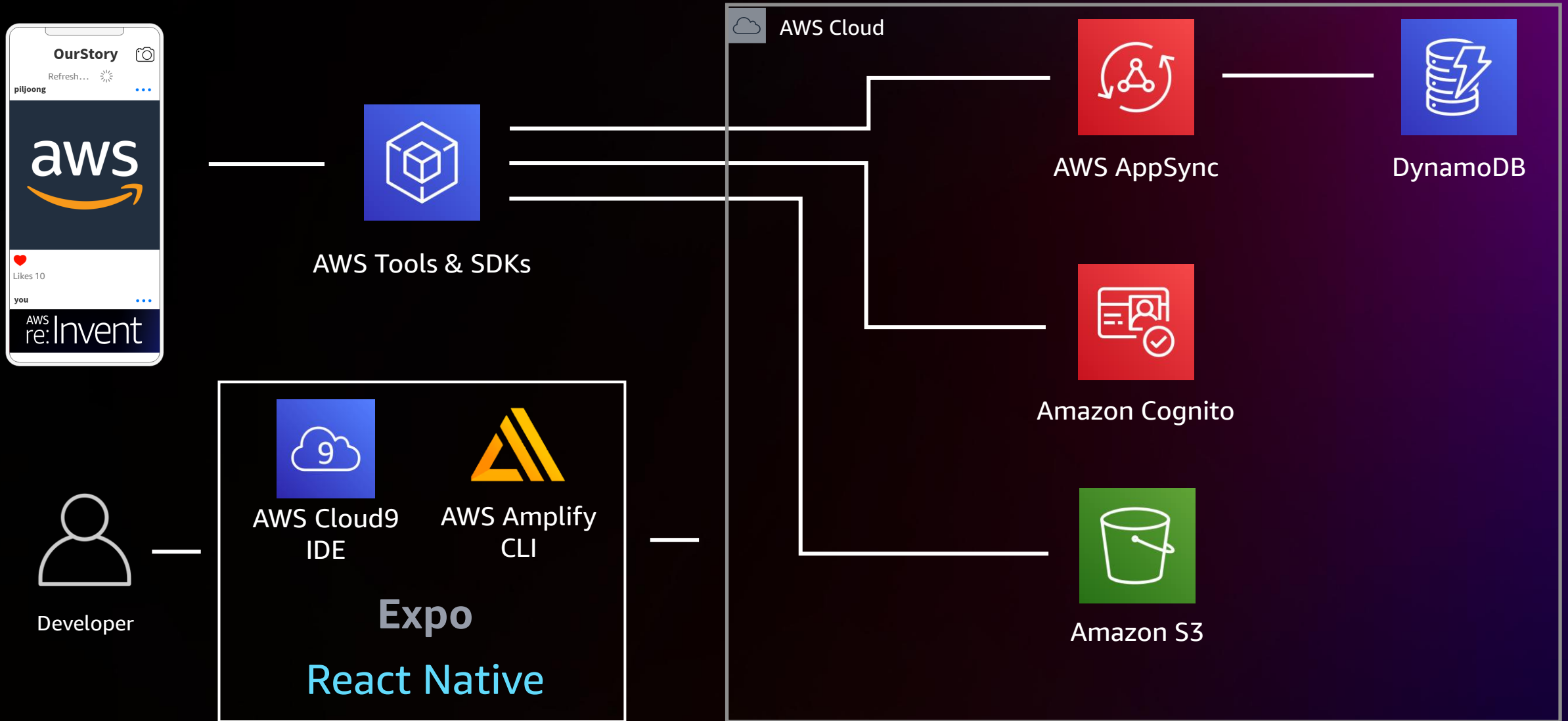
Work with augmented reality and virtual reality content in your apps

Extensibility

Extend the power of Amplify with 175+ AWS services



OurStory: Architecture



Let's get started!



Need help?



Lab guide

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

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**

