Building your own spatially enabled Web App with Modern Frameworks and Tooling

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2021 ESRI DEVELOPER SUMMIT

Creating Apps

Our setup

- **Application Base**

- **Esri 4.x JS API (ESM)**

- **Esri Design System**

ApplicationBase

- **Handle common JS API tasks**

- **Set config values in a JSON file to:**
  - **Setup OAuth login**
  - **Fetch metadata on apps, webmaps, or webscenes**
  - **Set the Locale for Language translation**
  - **Properly set values on the esriConfig ("portalUrl", "proxyUrl"… etc)**
  - **Set arbitrary configuration properties in the App**

https://github.com/Esri/application-base-js

Include ArcGIS API for JavaScript as ES modules

- **Before 4.18, the API has shipped as Asynchronous Module Definition (AMD) modules.**
    - **Implements AMD format**
    - **Use of `require()`**
    - **3rd party script loader**

- **Since 4.18, the API is available as ESM (ECMAScript Modules)**
    - **ES modules considered an official standard format for packaging and reusing JavaScript code**
    - **Currently in beta**
    - **Don't require a separate script loader**
- **Available to install in your project via npm**
    - **npm install @arcgis/core**
- **API functionality between AMD and ES modules is the same**

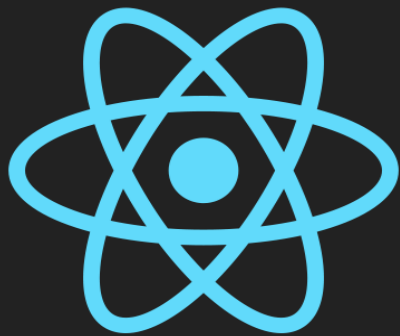https://developers.arcgis.com/javascript/latest/es-modules/

UI Web Components from Esri's Design System

- **Web Components**
  - https://developer.mozilla.org/en-US/docs/Web/Web_Components
- **Consistent UI patterns across Esri Web Products**
- **Examples in action:**
  - https://esri.github.io/calcite-components/
- **Open Source**

https://github.com/Esri/calcite-components

Modern JS Frameworks

Mixing in the Esri approach

React

https://github.com/rslibed/instant-app-react

Ryan Libed

Angular

https://github.com/Csmith246/instant-app-angular

Cameron Smith

Summary

- **Esri Libraries**
  - **ApplicationBase**
  - **ArcGIS JS 4.x API (ESM)**
  - **Esri Design System**
- **Frameworks**
  - **React Starter Code**
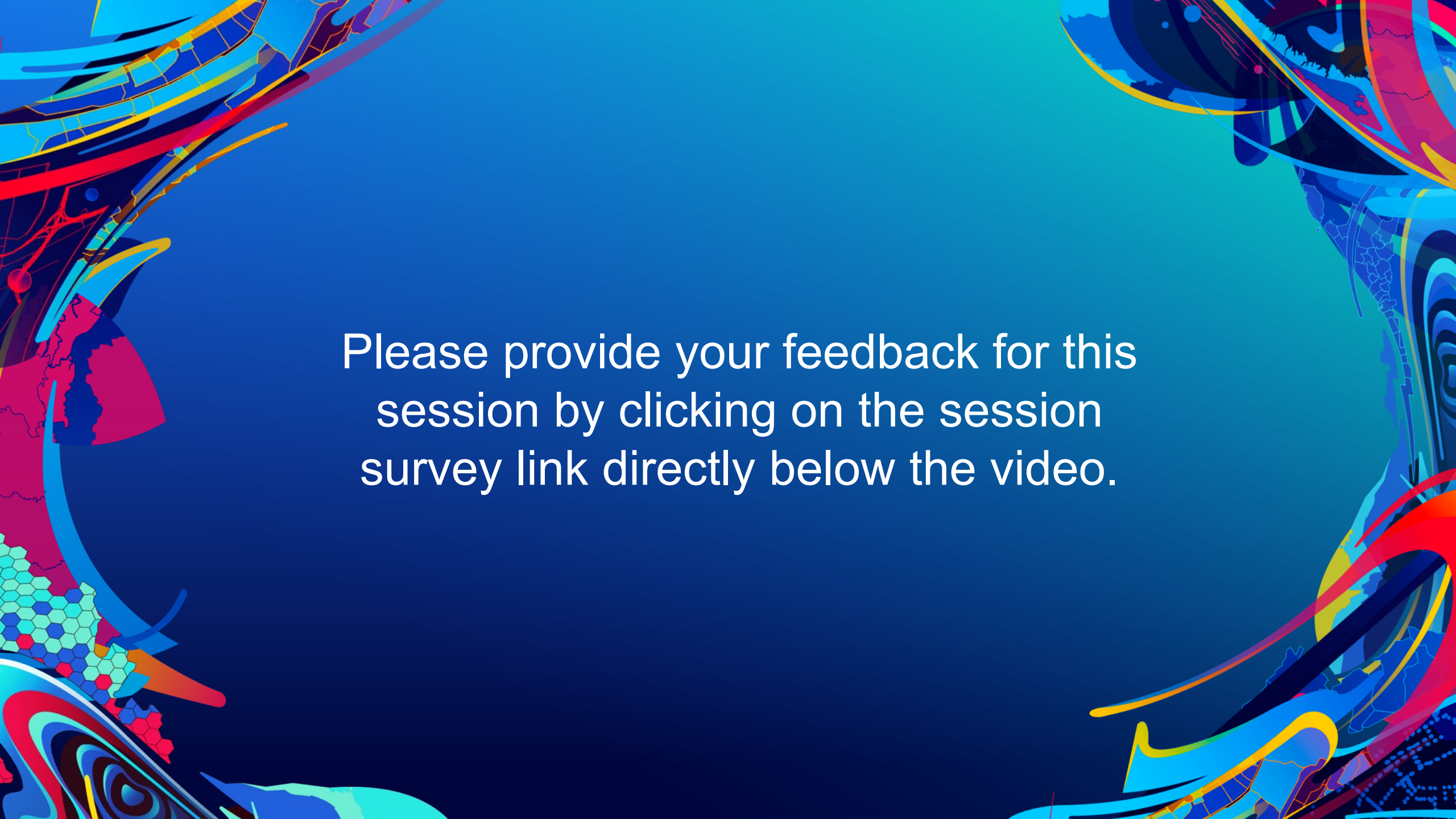 - **Angular Starter Code**

(https://github.com/Esri/application-base-js**)**

(https://developers.arcgis.com/javascript/latest/es-modules**)**

(https://github.com/Esri/calcite-components**)**

(https://github.com/rslibed/instant-app-react)

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