ArcGIS Experience Builder: Building Your First Widget

Gavin Rehkemper

Solution code and slides: https://esriurl.com/fw-ds-25

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About Gavin

- Web developer
- Esri Professional Services

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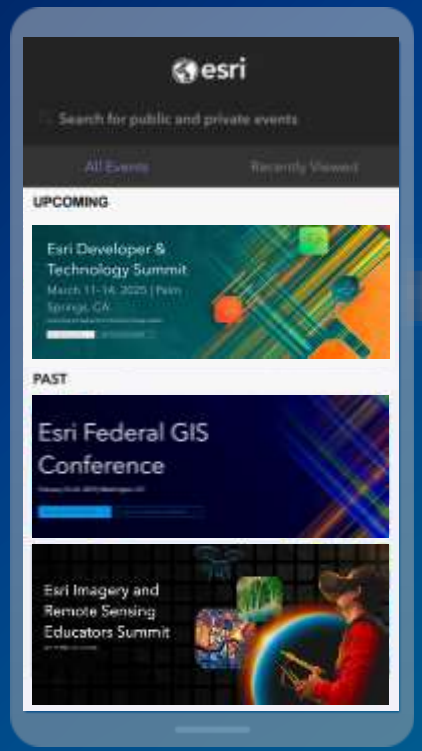

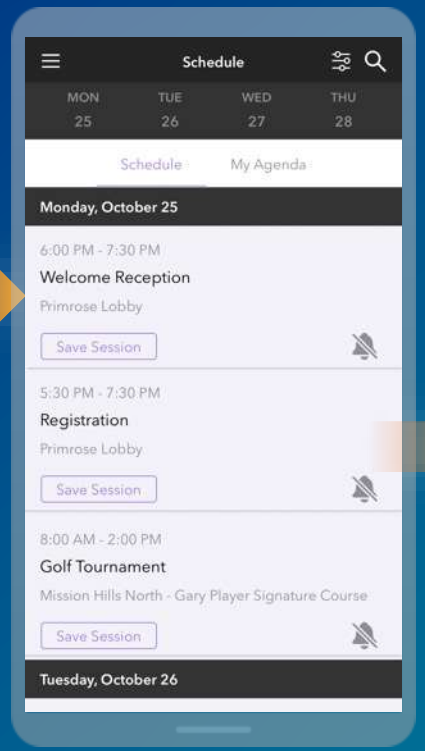

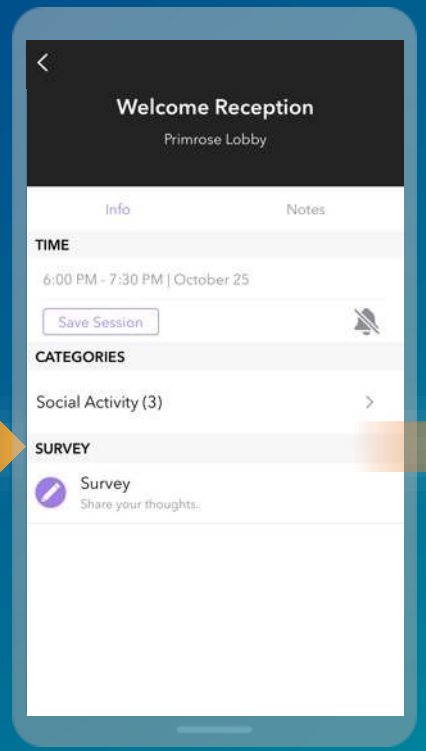

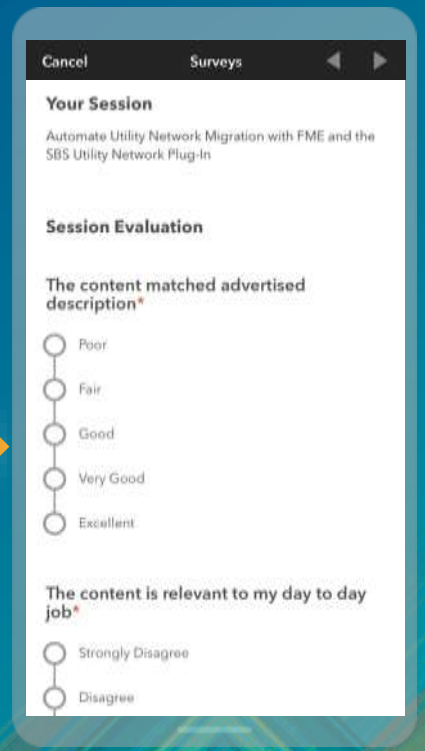

Agenda

- Development environment
- Building your first widget
- Debugging
- Questions

Solution code and slides: https://esriurl.com/fw-ds-25

Assumptions

- Experience Builder knowledge
- Familiar with basic web development

- Medium pace - ✅ Code along
- Getting started - ✅ Production-ready code

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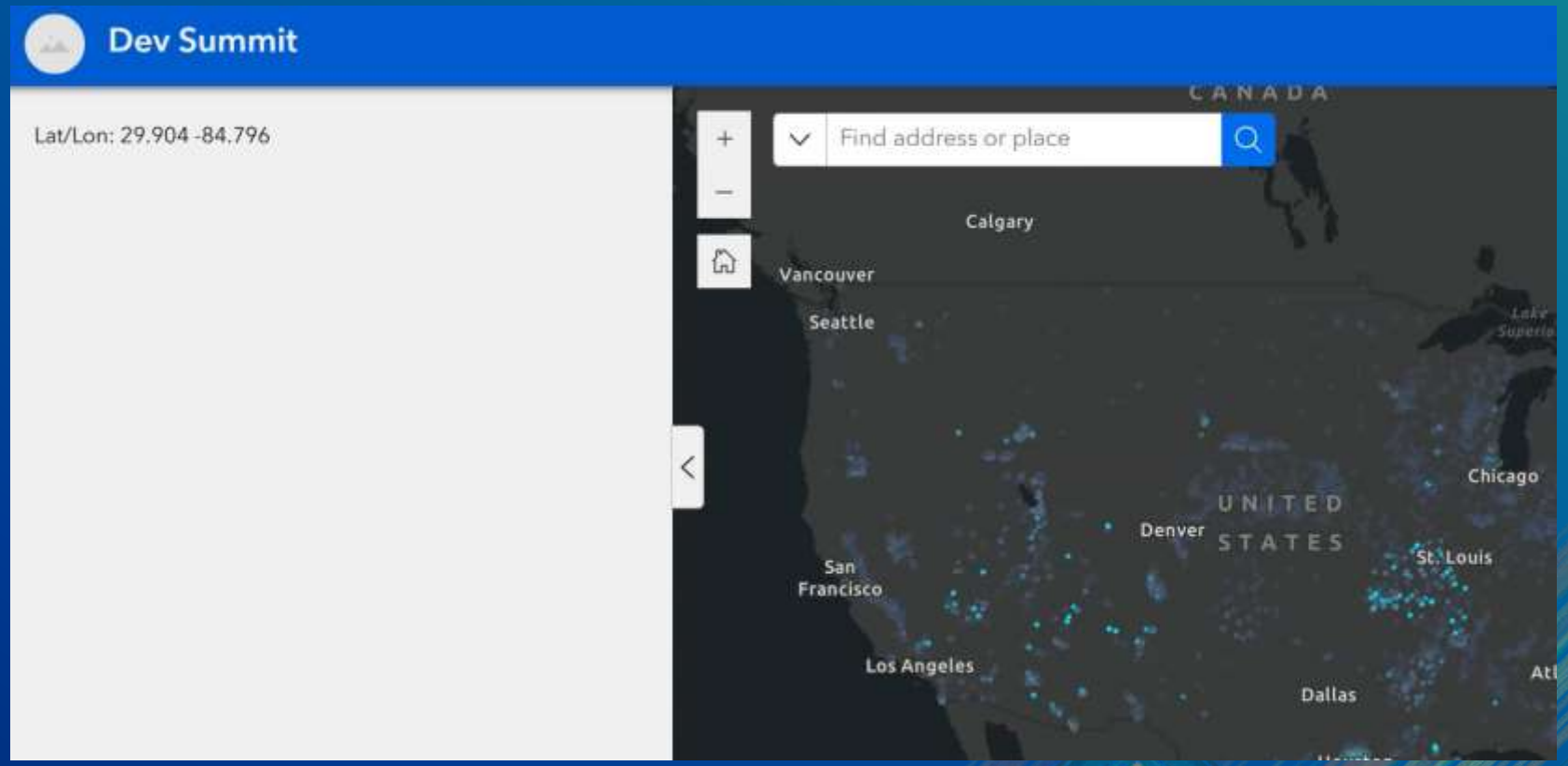
The Goal

“Get Map Coordinates” widget:



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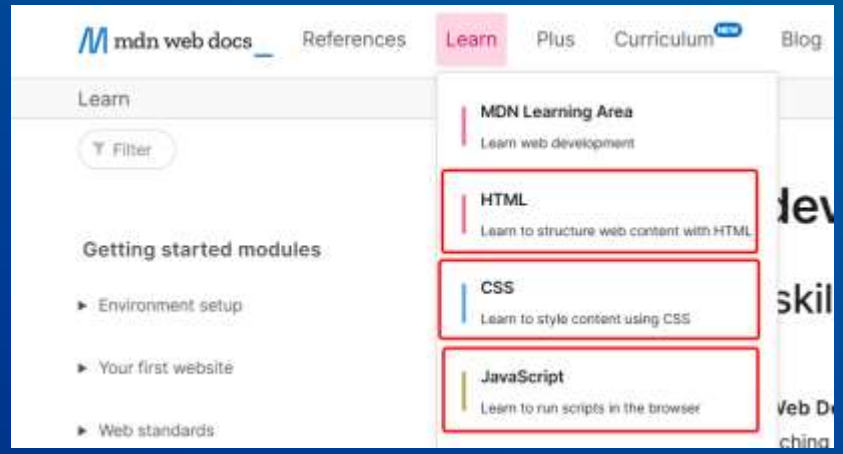
Technologies

HTML, CSS, JavaScript



developer.mozilla.org

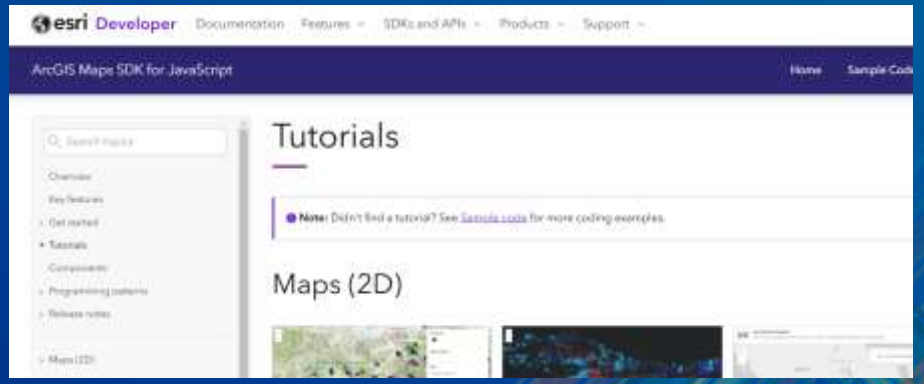
TypeScript

typescriptlang.org/docs

React/JSX

react.dev/learn

ArcGIS Maps SDK for JavaScript



esriurl.com/js-tutorials

Development Environment

Steps to setup your development environment

1. Install Prerequisites (NodeJS)

   Download from: nodejs.org

2. Download Experience Builder Developer Edition
   1. Developers.arcgis.com
3. Unzip the files

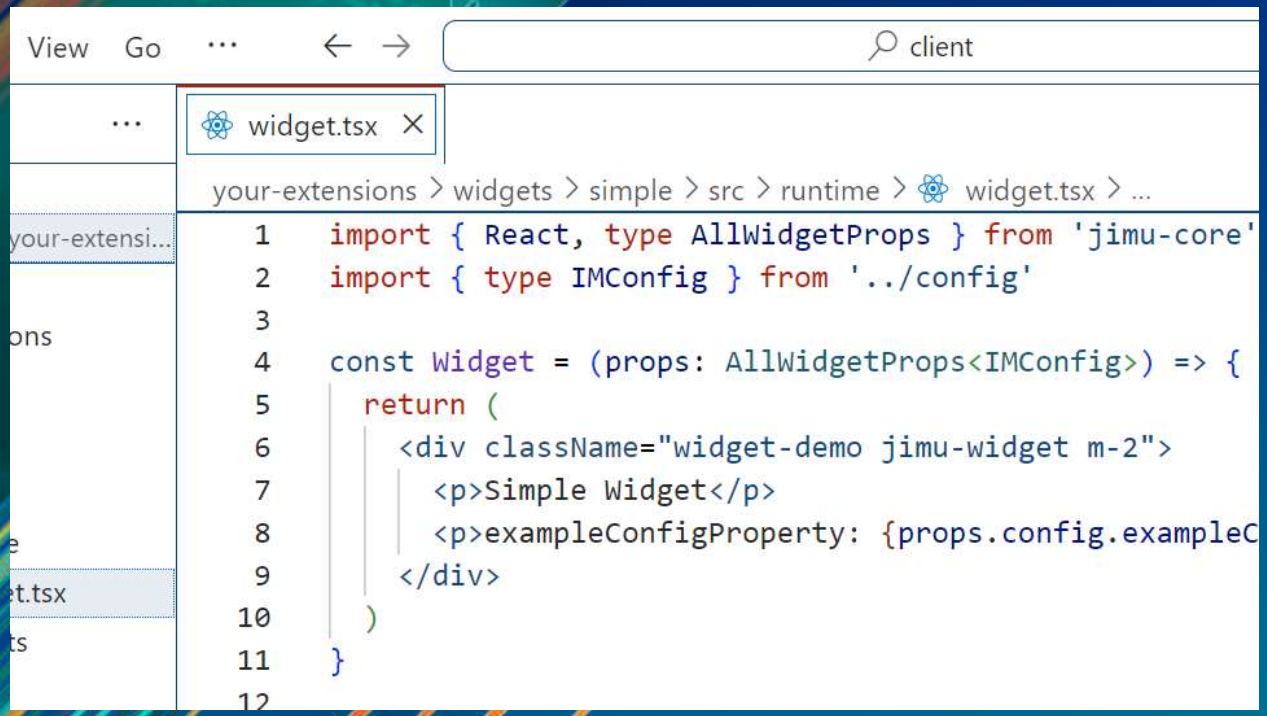
Steps to setup your development environment (cont'd)

4. Command line in ***/server*** directory:
   - npm ci
   - npm start
5. Command line in ***/client*** directory:
   - npm ci
   - npm start
6. Create example Experience app

Text Editor: Visual Studio Code

- Download: code.visualstudio.com

- Open the **`/client`** folder as a project (drag-drop)

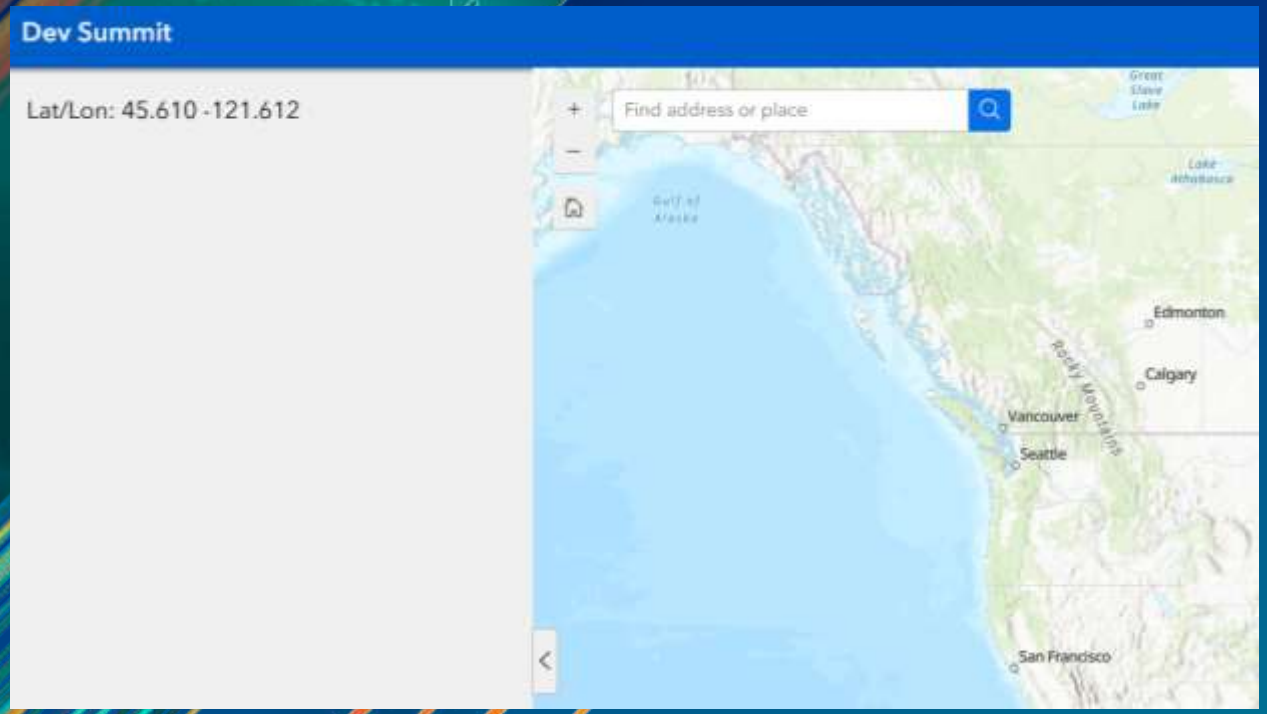


Demo: development environment setup

Building your first widget

Custom widget - steps

1. Install and setup Developer Edition of Experience Builder
2. Go to **\client\your-extensions\widgets** and copy the sample widget
3. Rename the sample widget
   - ***The directory name and manifest.json name must match exactly!***

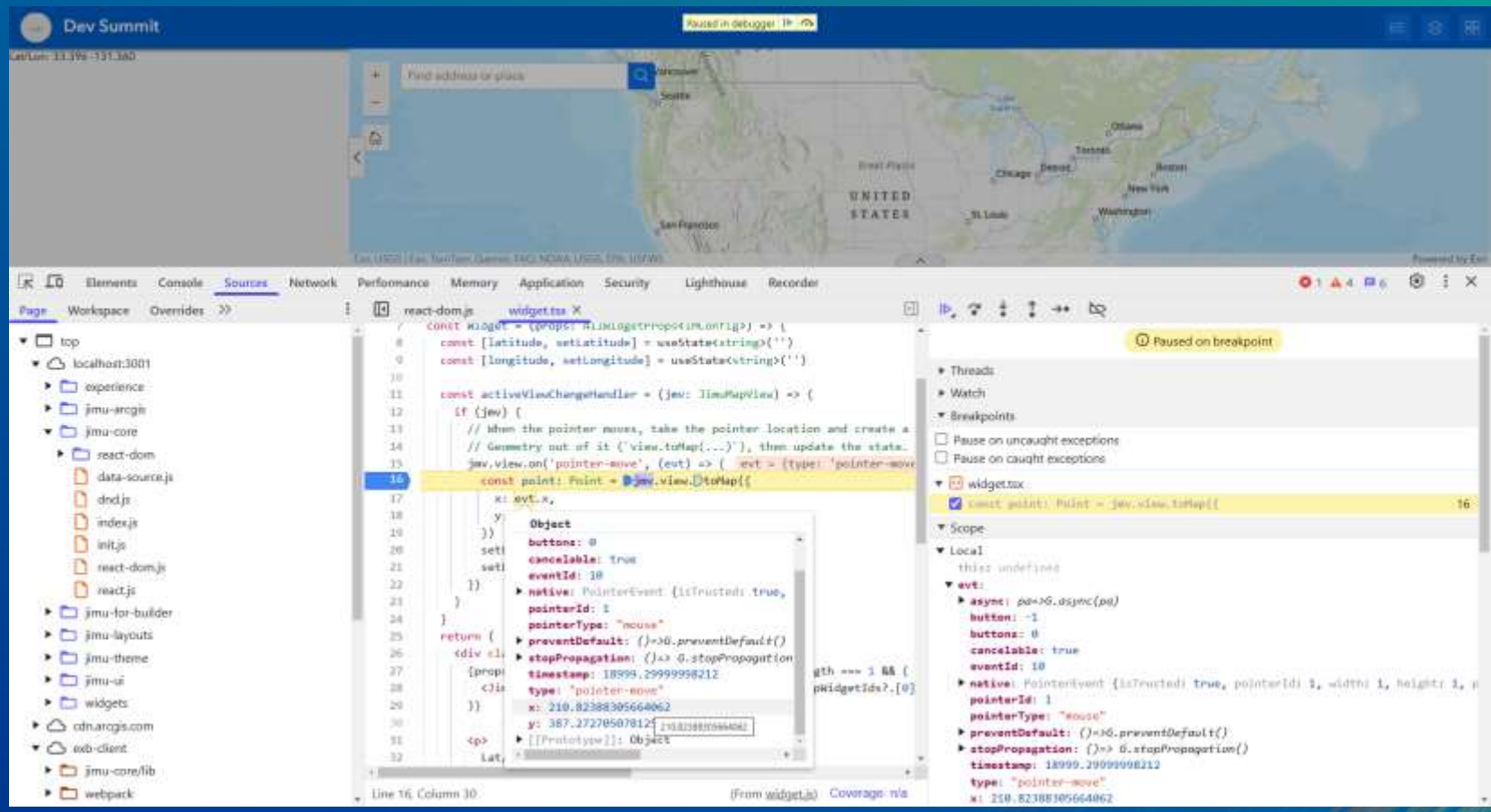


Demo: Your first widget

Debugging

Debugging tools

- Browser developer tools
  - JavaScript source and breakpoints
  - Global variables
  - Network tab
- React Developer Tools (browser extension)



More info:
https://developers.arcgis.com/experience-builder/guide/debugging-widget-development/

Common issues

- Re-start “npm start” script on file create
- Open “client” folder as a project – TypeScript!
- “jimu-arcgis” dependency
- Understand React state
- Use Experience Builder “Data Sources”

Resources

- Documentation:
  https://developers.arcgis.com/experience-builder

- Community:
  https://community.esri.com/community/arcgis-experience-builder

- Sample Code:
  https://github.com/Esri/arcgis-experience-builder-sdk-resources

- Solution code from this talk:
  https://esriurl.com/fw-ds-25

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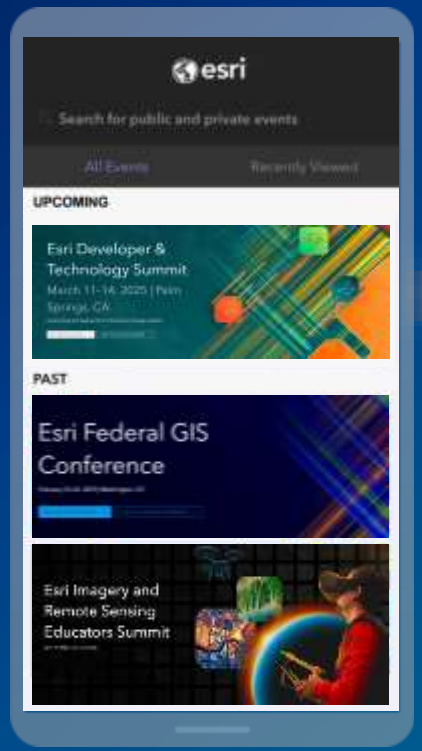

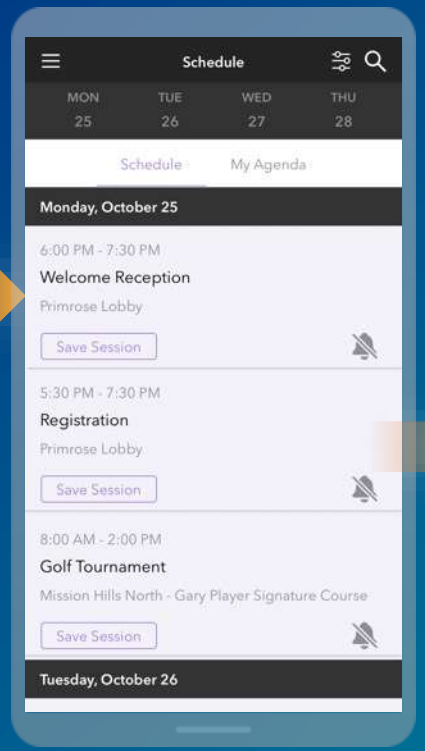

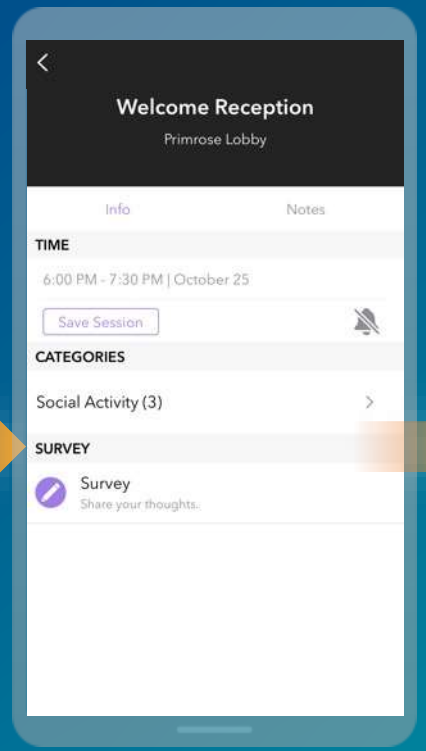

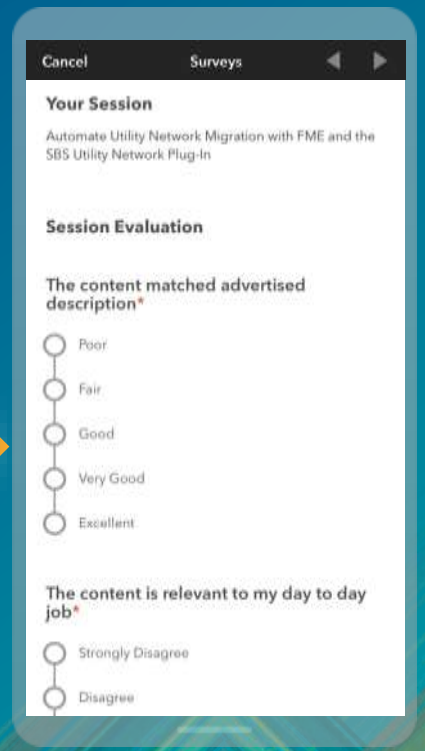

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