

# ArcGIS Experience Builder: Building Your First Widget

Gavin Rehkemper

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

2025 ESRI DEVELOPER & TECHNOLOGY SUMMIT



# About Gavin

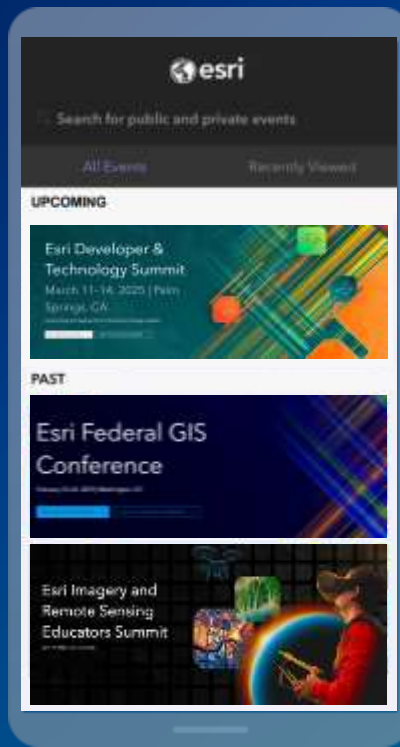
- Web developer
- Esri Professional Services



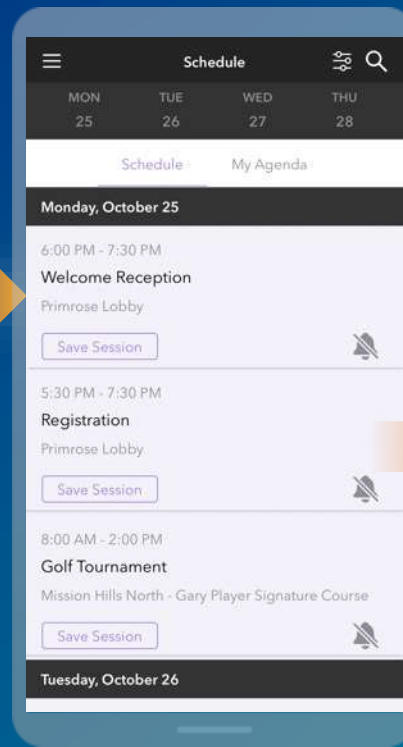


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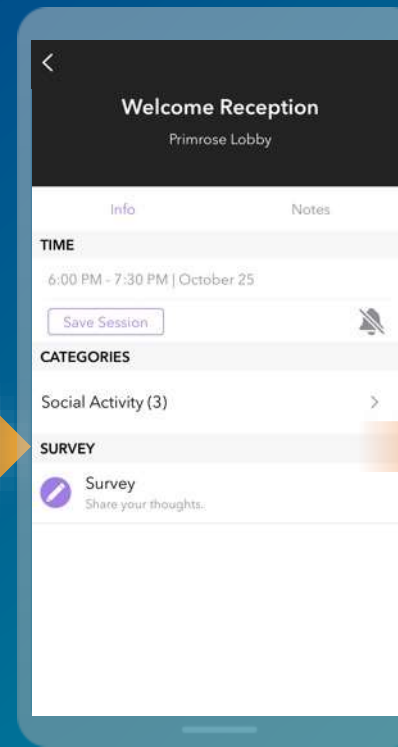
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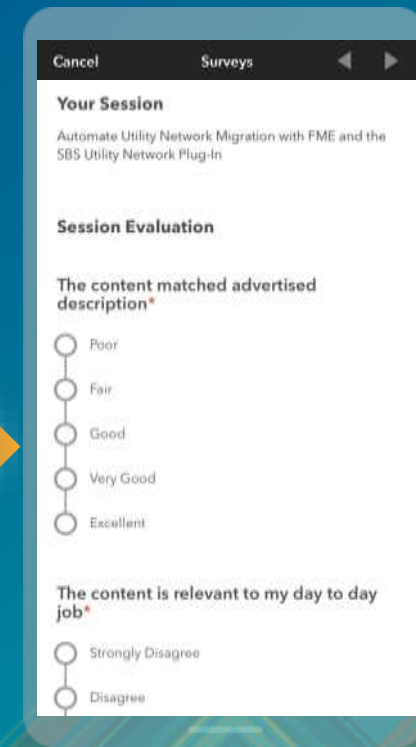
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# Agenda

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

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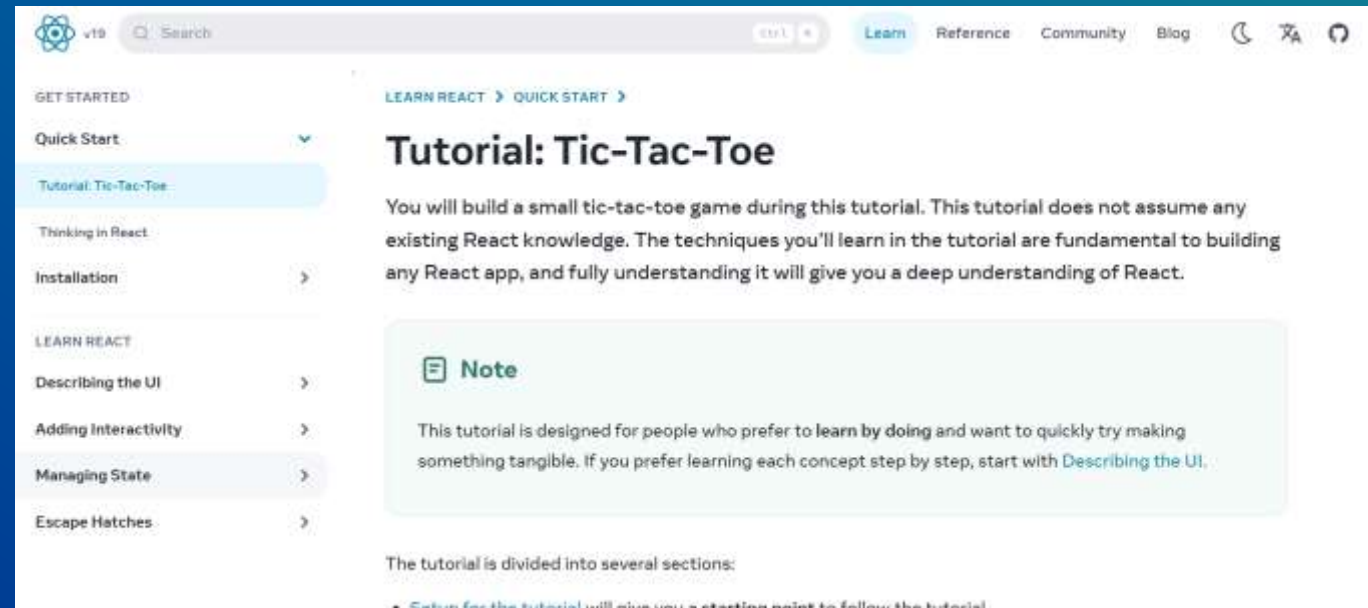
# Assumptions

- Experience Builder knowledge
- Familiar with basic web development
- Medium pace - ☒ Code along
- Getting started - ☒ Production-ready code

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# Technologies

- HTML, CSS, JavaScript
- React/JSX
- TypeScript
- ArcGIS API for JavaScript



<https://react.dev/learn>



# Development Environment



# Steps to setup your development environment

1. Install Prerequisites (NodeJS)

*Download from: [nodejs.org](https://nodejs.org)*

2. Download Experience Builder Developer Edition

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

# Text Editor: Visual Studio Code

- Download: [code.visualstudio.com](https://code.visualstudio.com) 
- Open the /client folder as a project (drag-drop)



```
View Go ... < > client
... widget.tsx X
your-extensions > widgets > simple > src > runtime > widget.tsx > ...
1 import { React, type AllWidgetProps } from 'jimu-core'
2 import { type IMConfig } from '../config'
3
4 const Widget = (props: AllWidgetProps<IMConfig>) => {
5   return (
6     <div className="widget-demo jimu-widget m-2">
7       <p>Simple Widget</p>
8       <p>exampleConfigProperty: {props.config.exampleC
9     </div>
10  )
11 }
12
```



# Demo: development environment setup

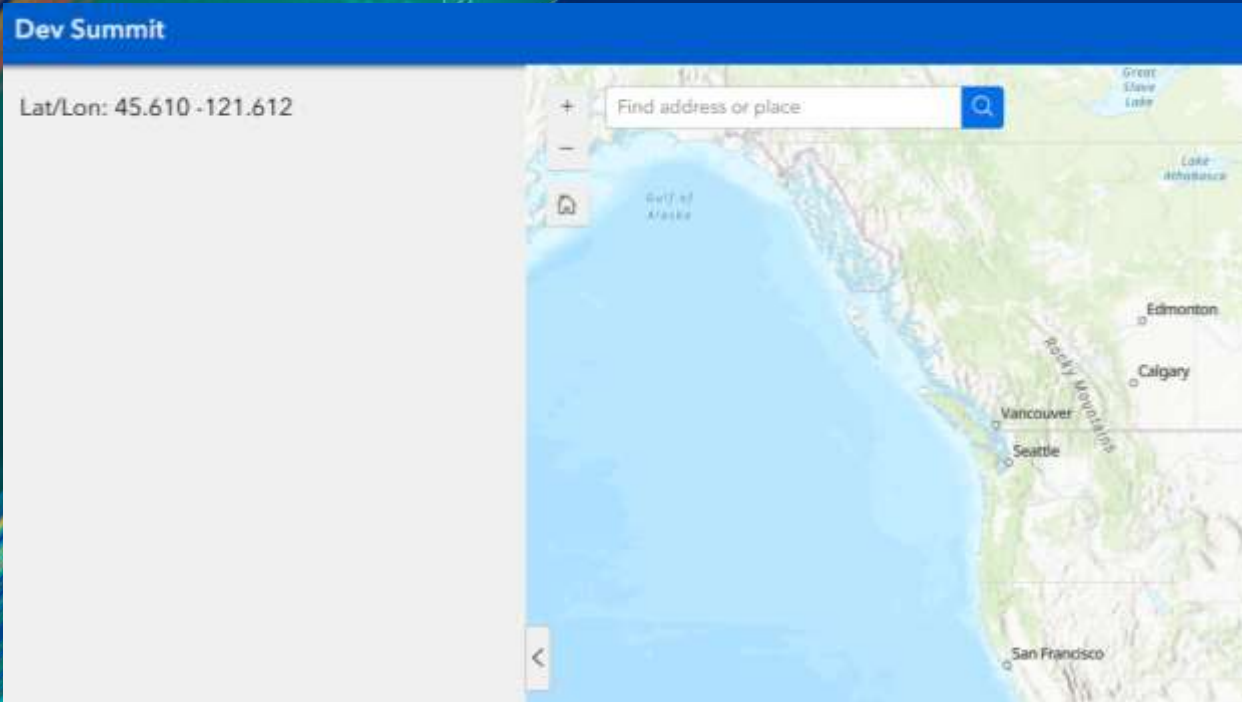


# Building your first widget



# Custom widget - steps

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



**Demo: Your  
first widget**

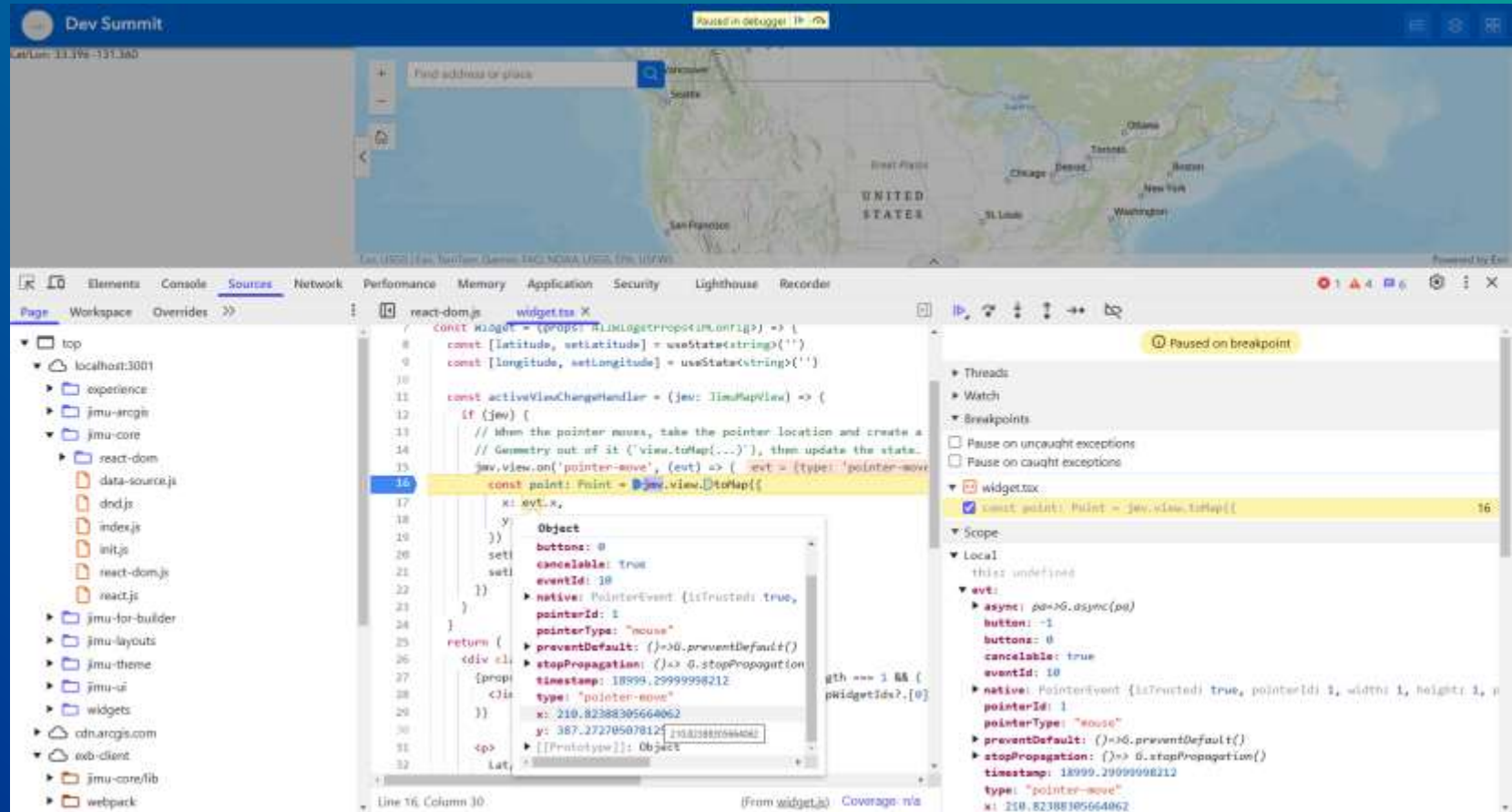


# Debugging



# 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

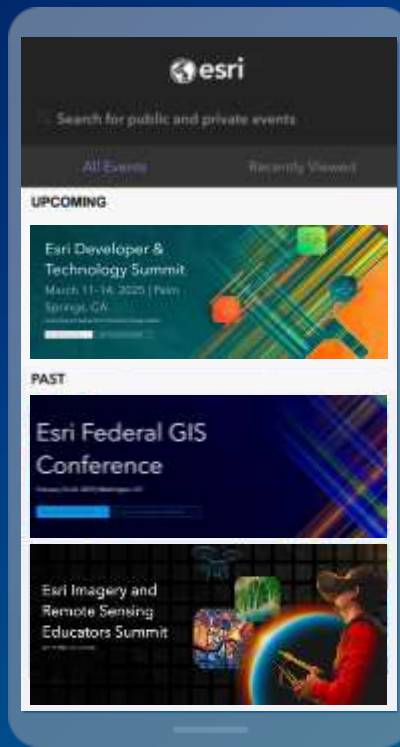
- Documentation:  
<https://developers.arcgis.com/experience-builder>
- Community:  
<https://community.esri.com/community/arcgis-experience-builder>
- Sample Code:  
<https://github.com/Esri/arcgis-experience-builder-sdk-resources>
- Solution code from this talk:  
<https://esriurl.com/fw-ds-25>

# Questions

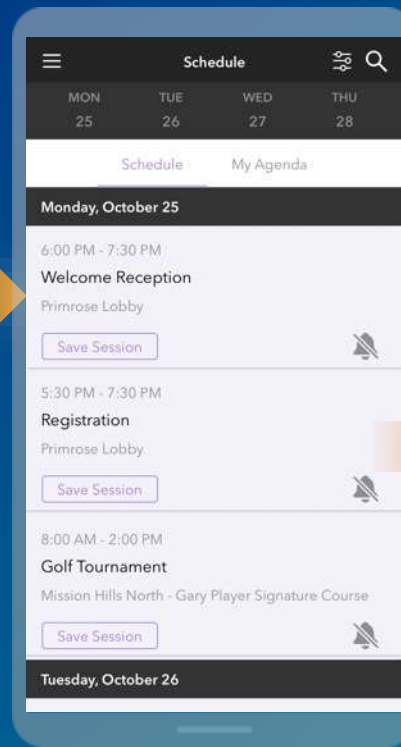


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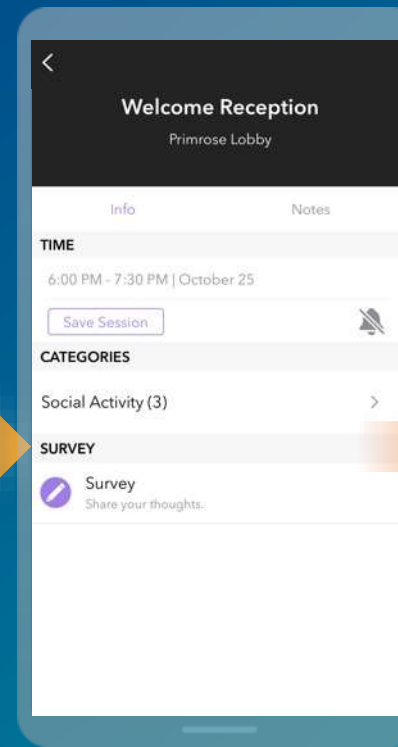
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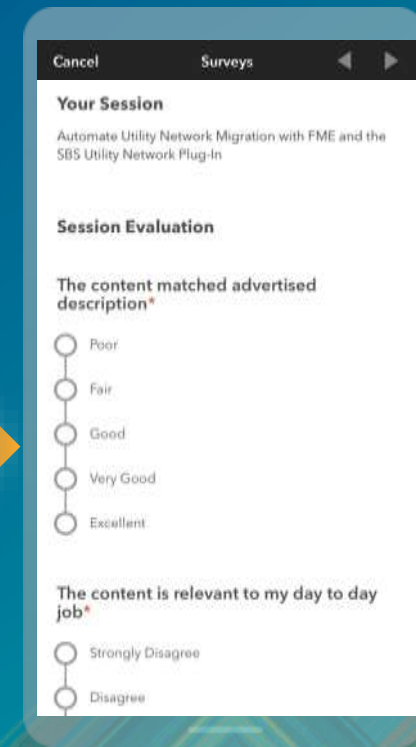
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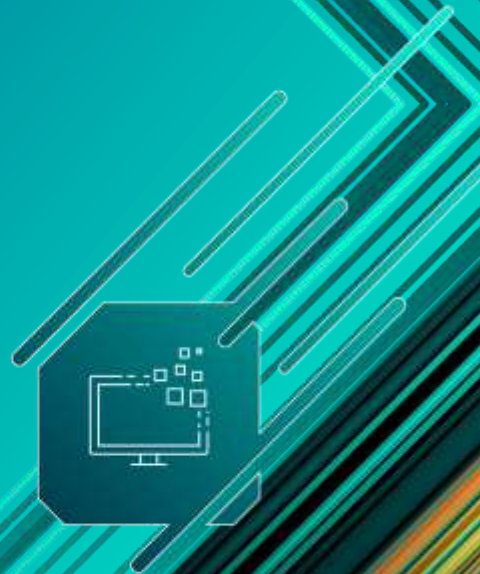
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