Beginning ArcGIS Pro SDK Project Development: Tips and Tricks for Troubleshooting

Lauren Boyd and Melanie Whalen

Assumptions

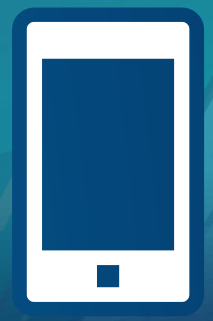
Target Audience

- Basic knowledge of .NET Development
- Basic experience creating ArcGIS Pro Add-Ins

- Not covering
  - Creation of ArcGIS Pro Configurations

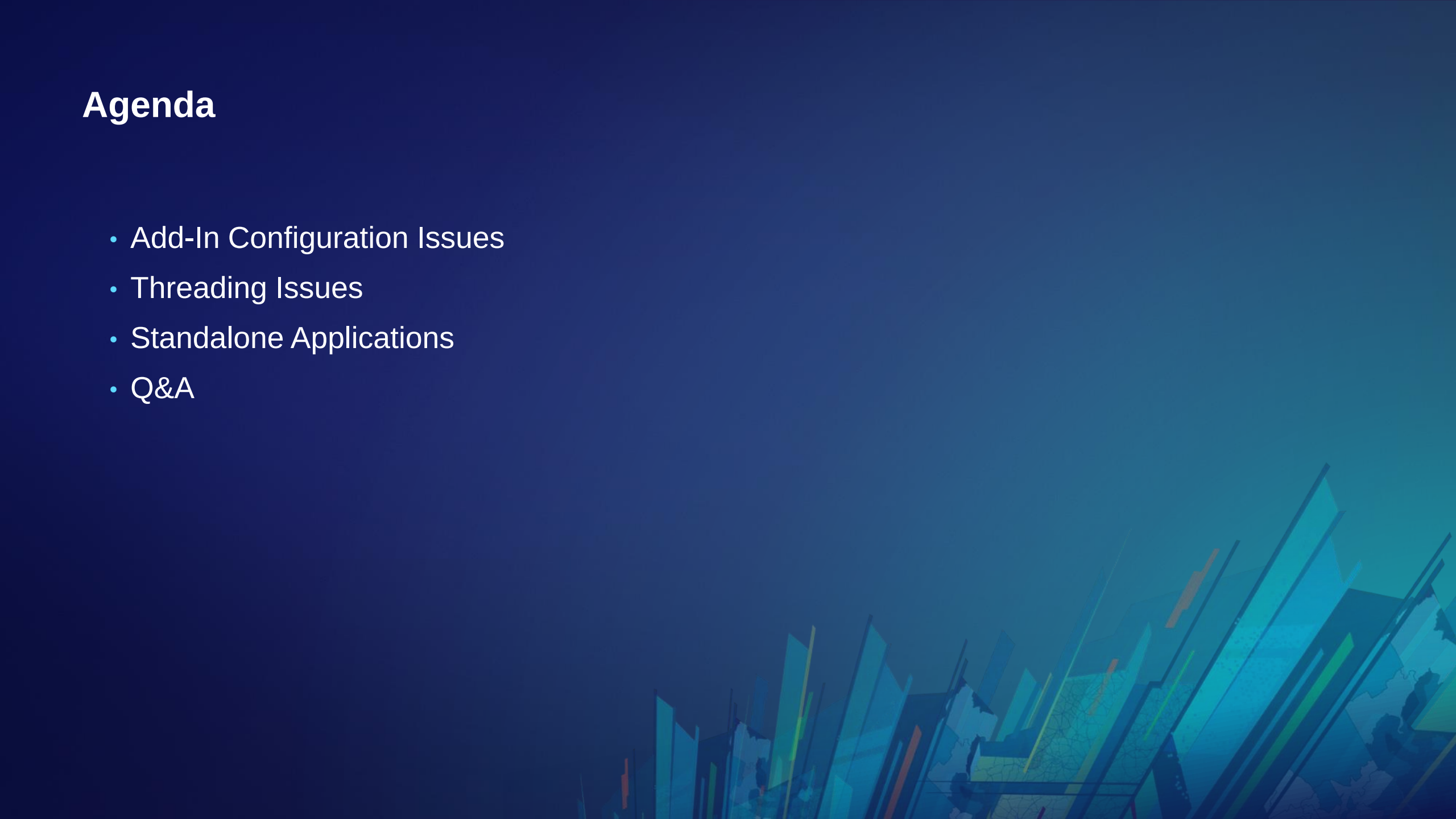
- Questions at the end of the presentation.

Please silence cell phones



Agenda

- Add-In Configuration Issues
- Threading Issues
- Standalone Applications
- Q&A

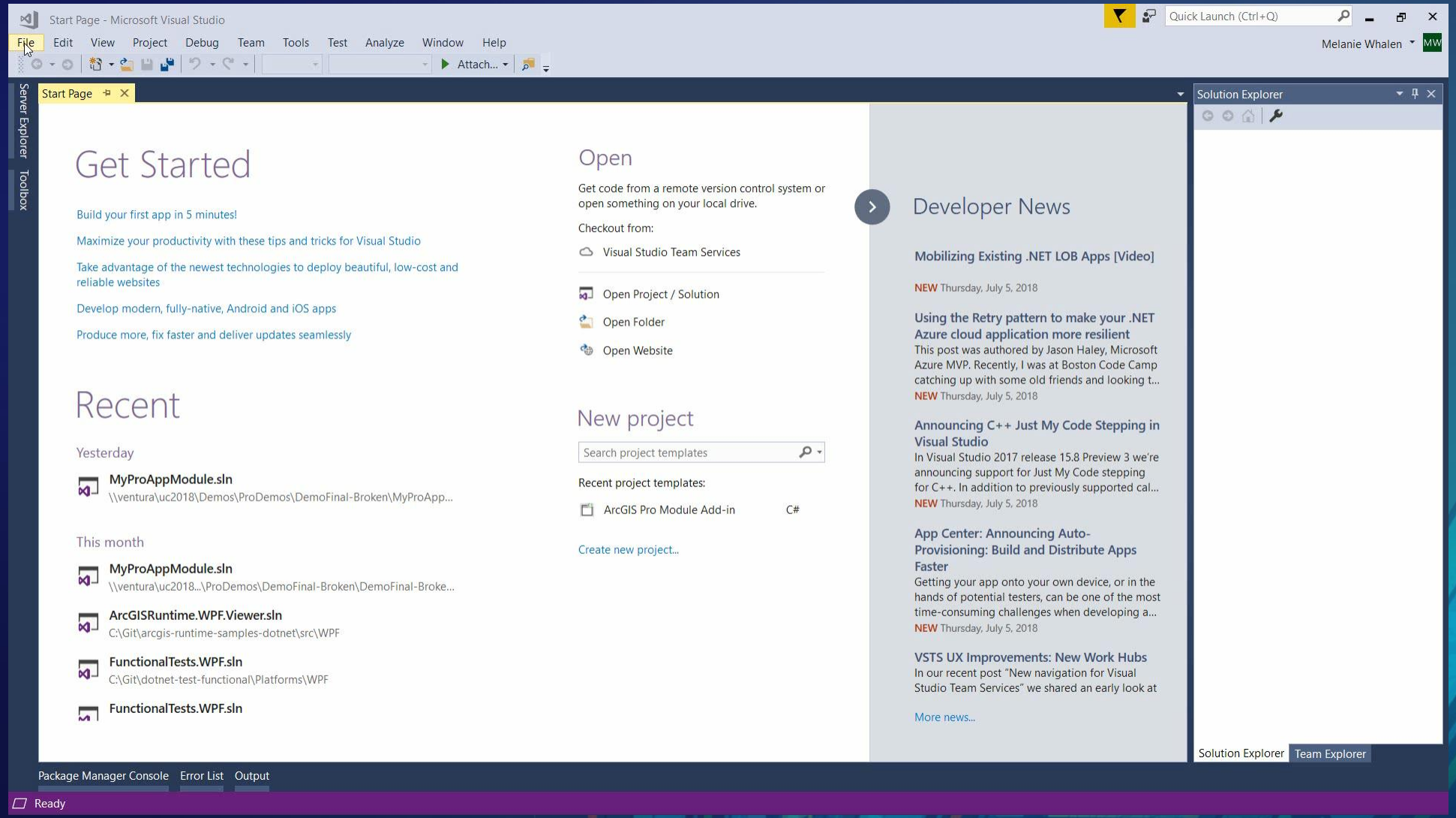


Add-In Configuration Issues

Add-In Configuration Issues

- Unable to create Add-In
- Broken references
- Add-In not loaded
- Add-In security
- Add-In cannot be loaded

Unable to create Add-In



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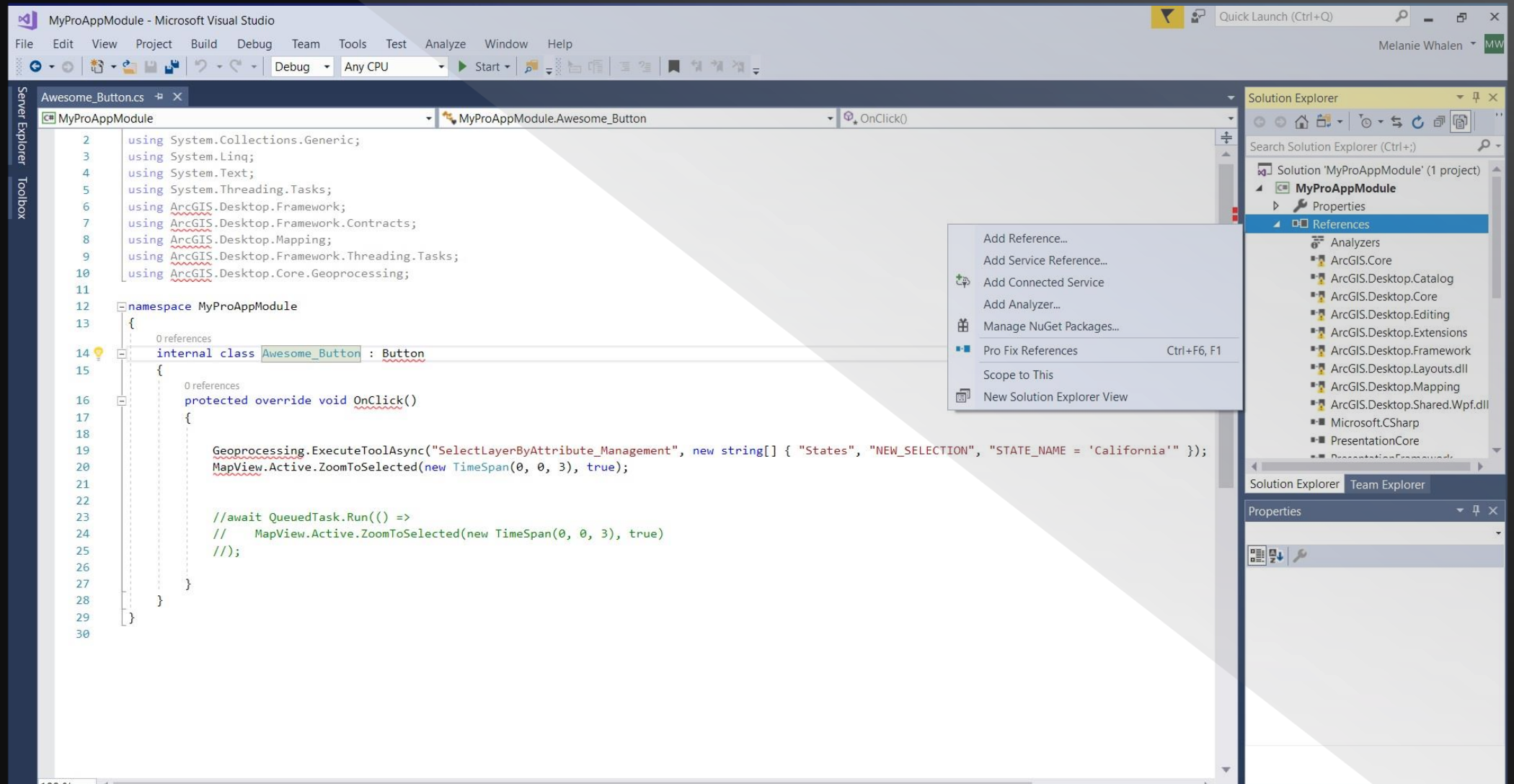

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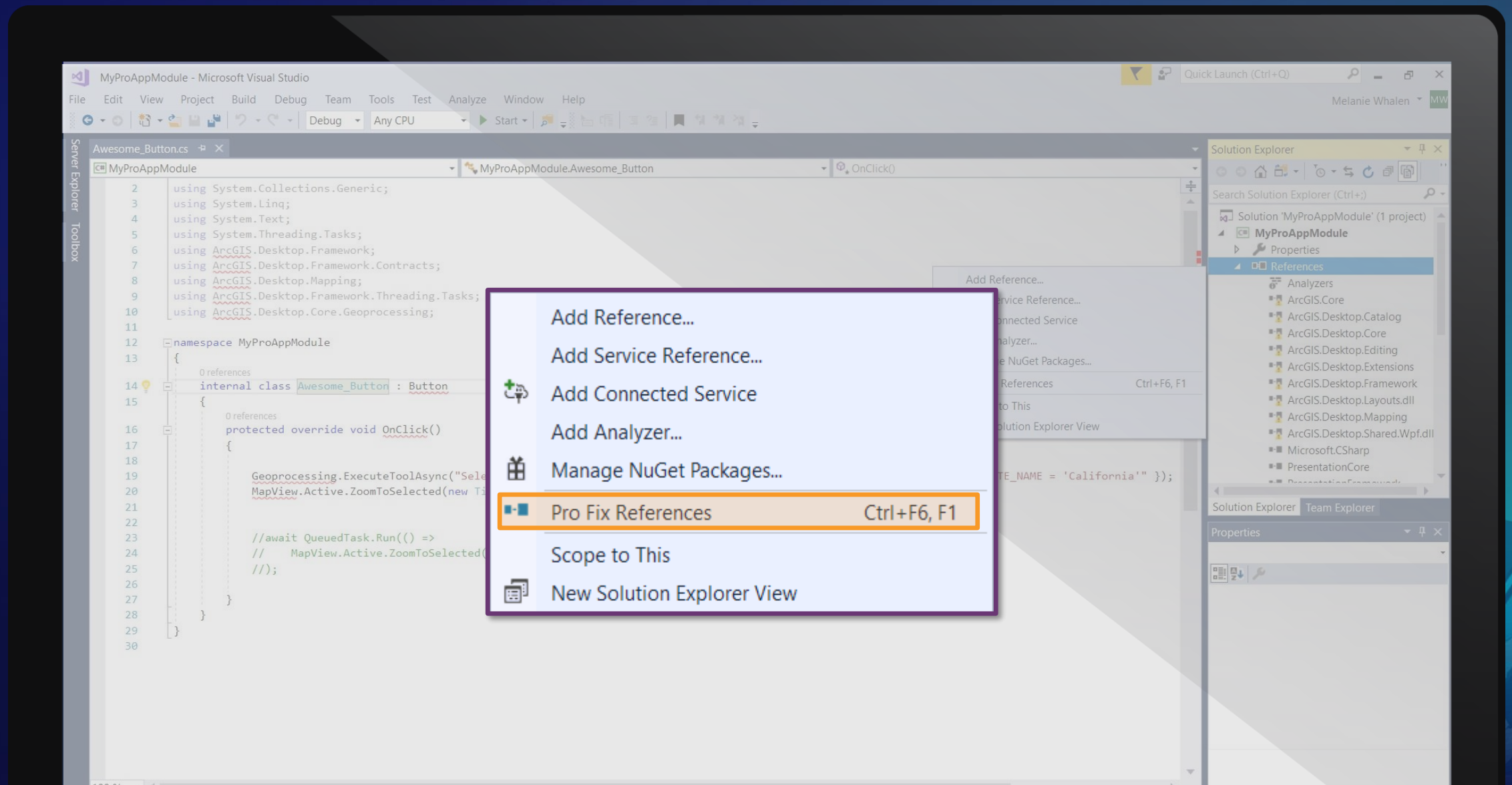

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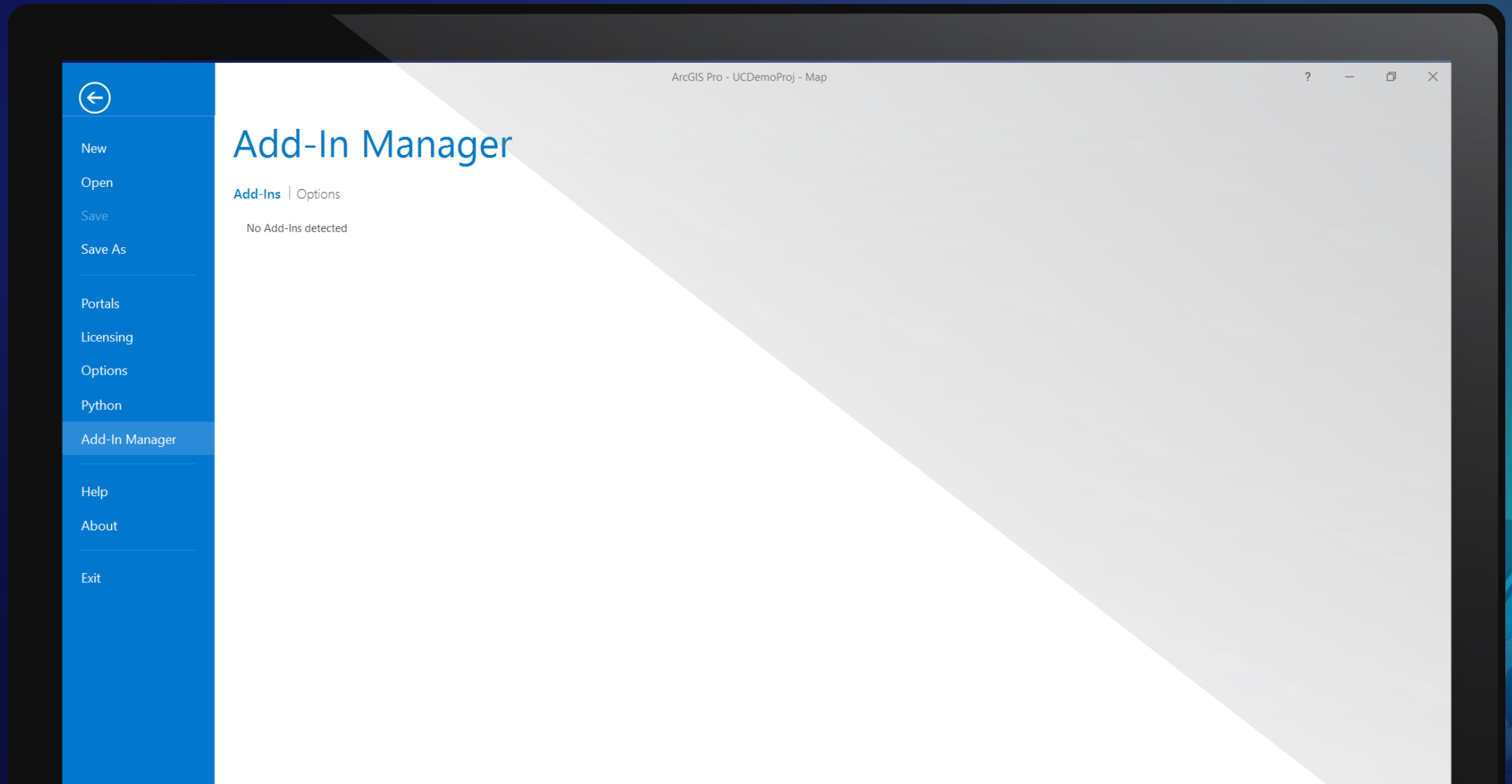

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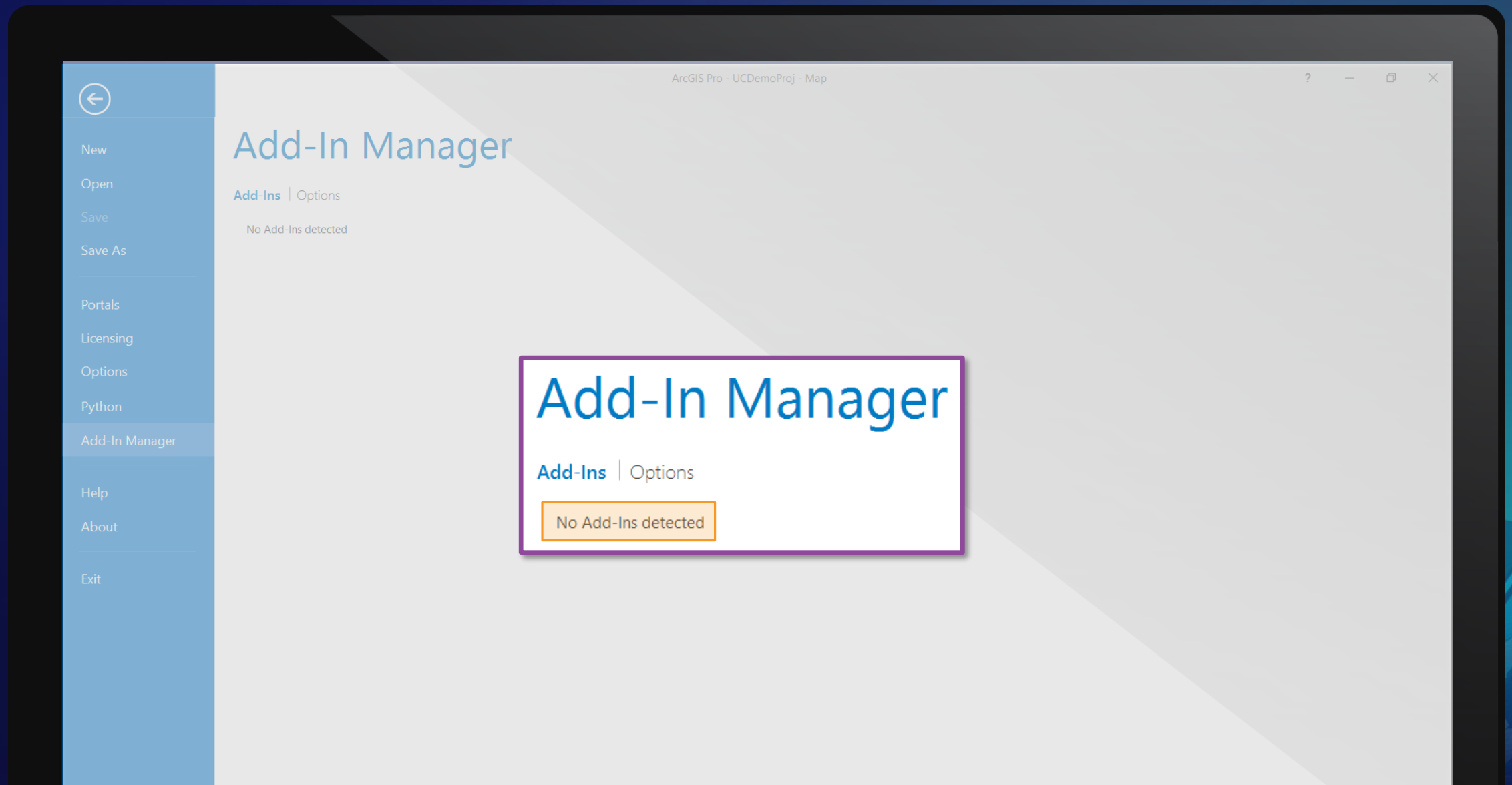
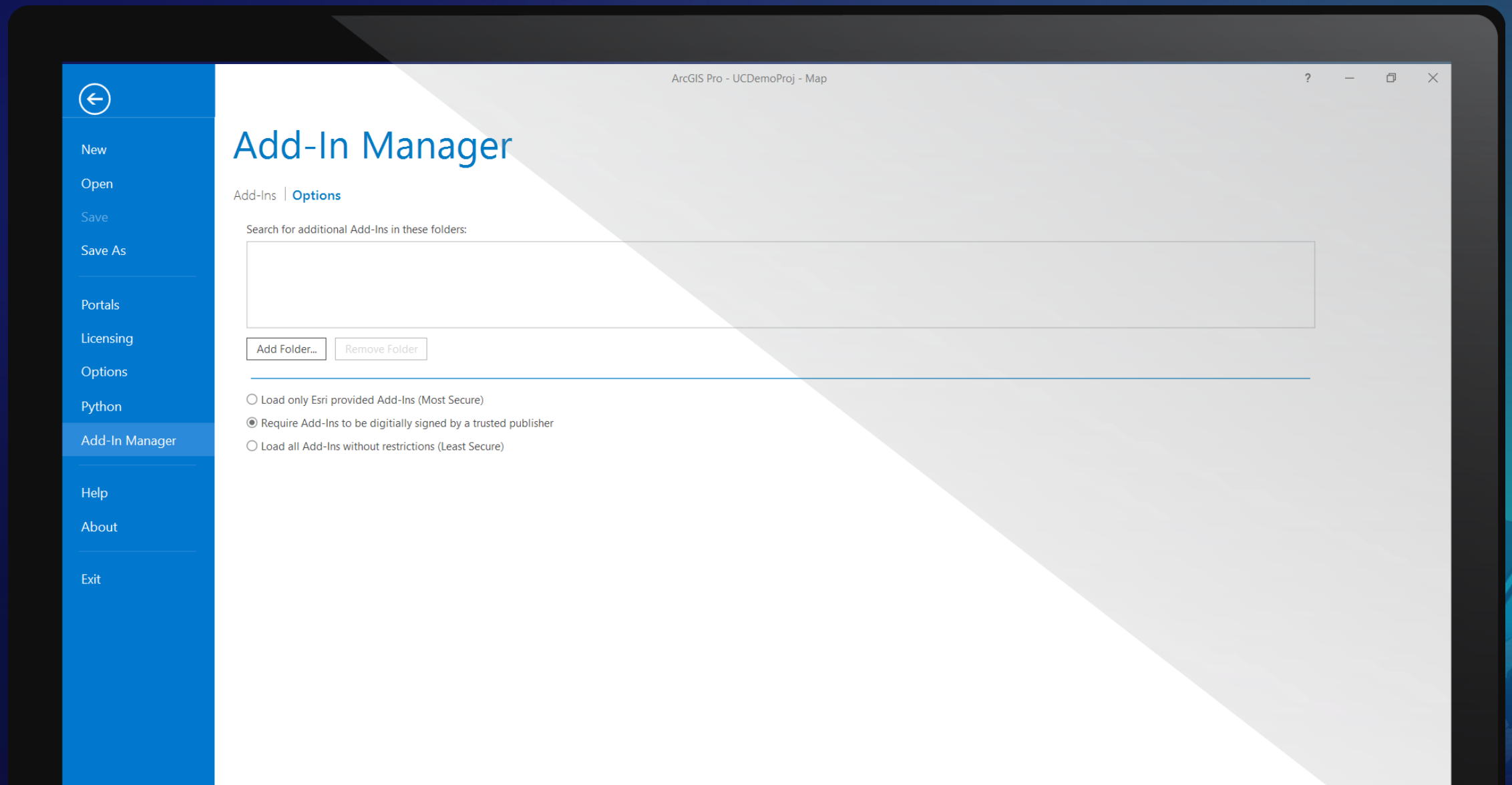


Add-In not loaded - Security



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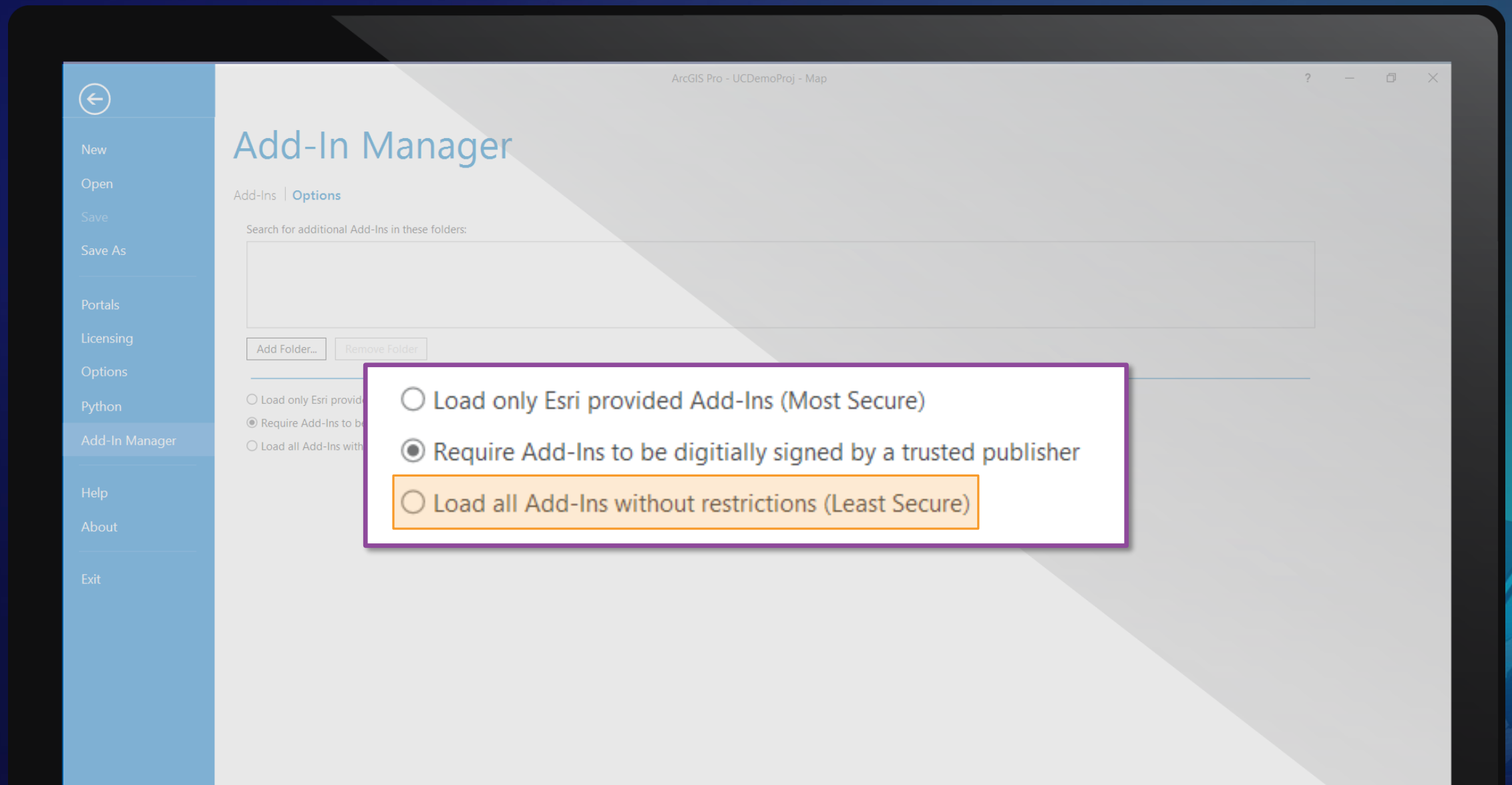

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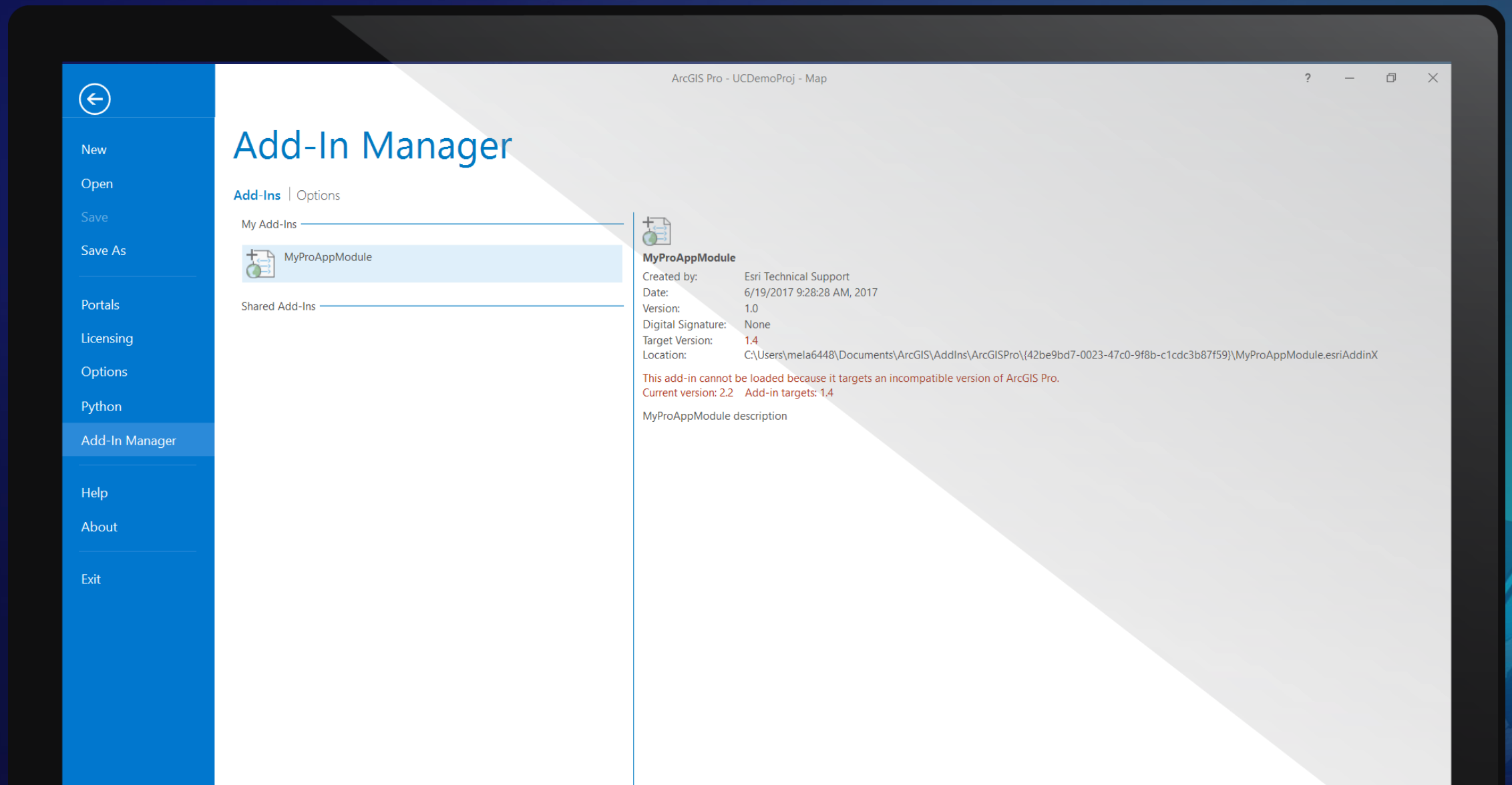

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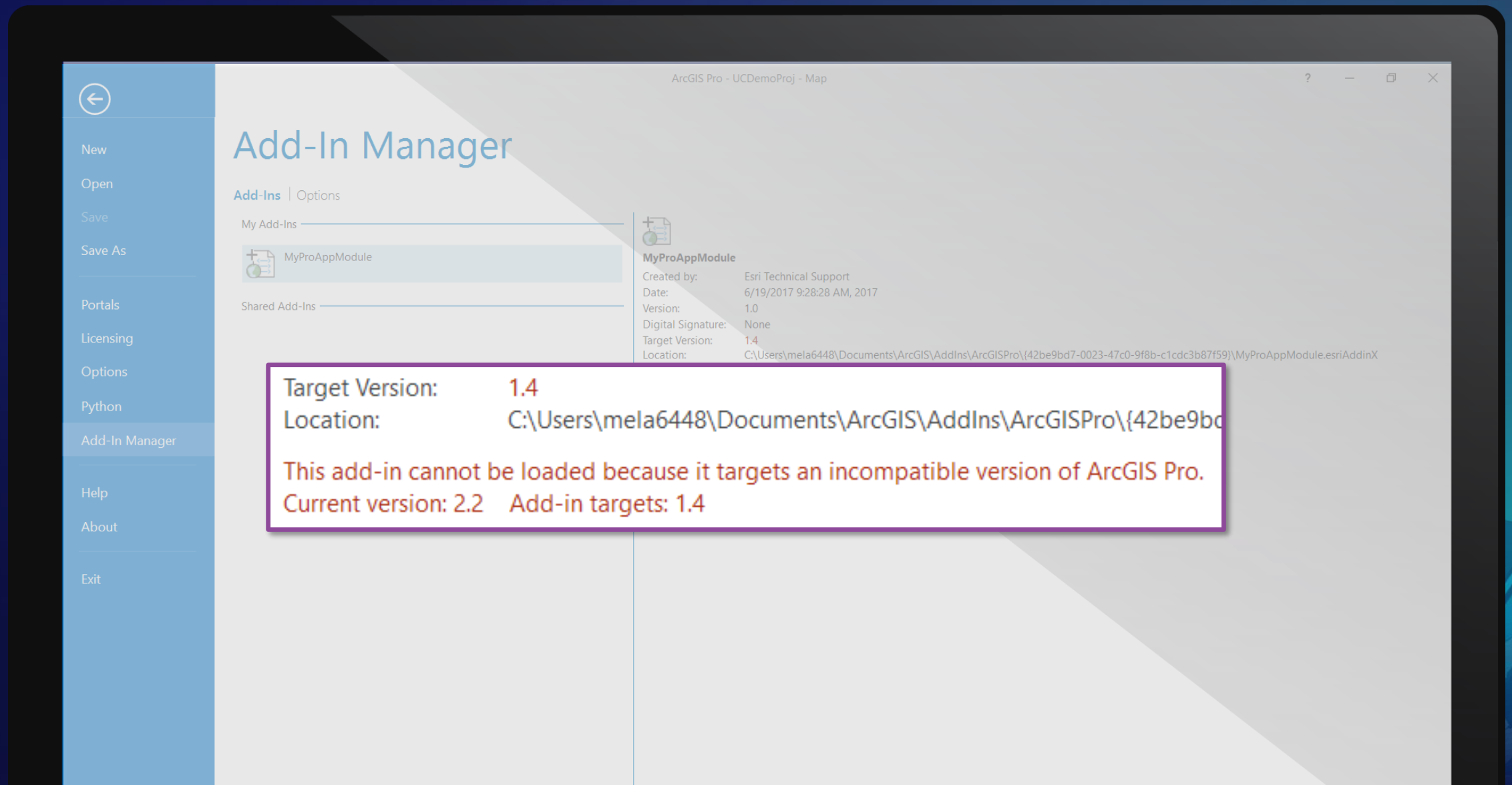

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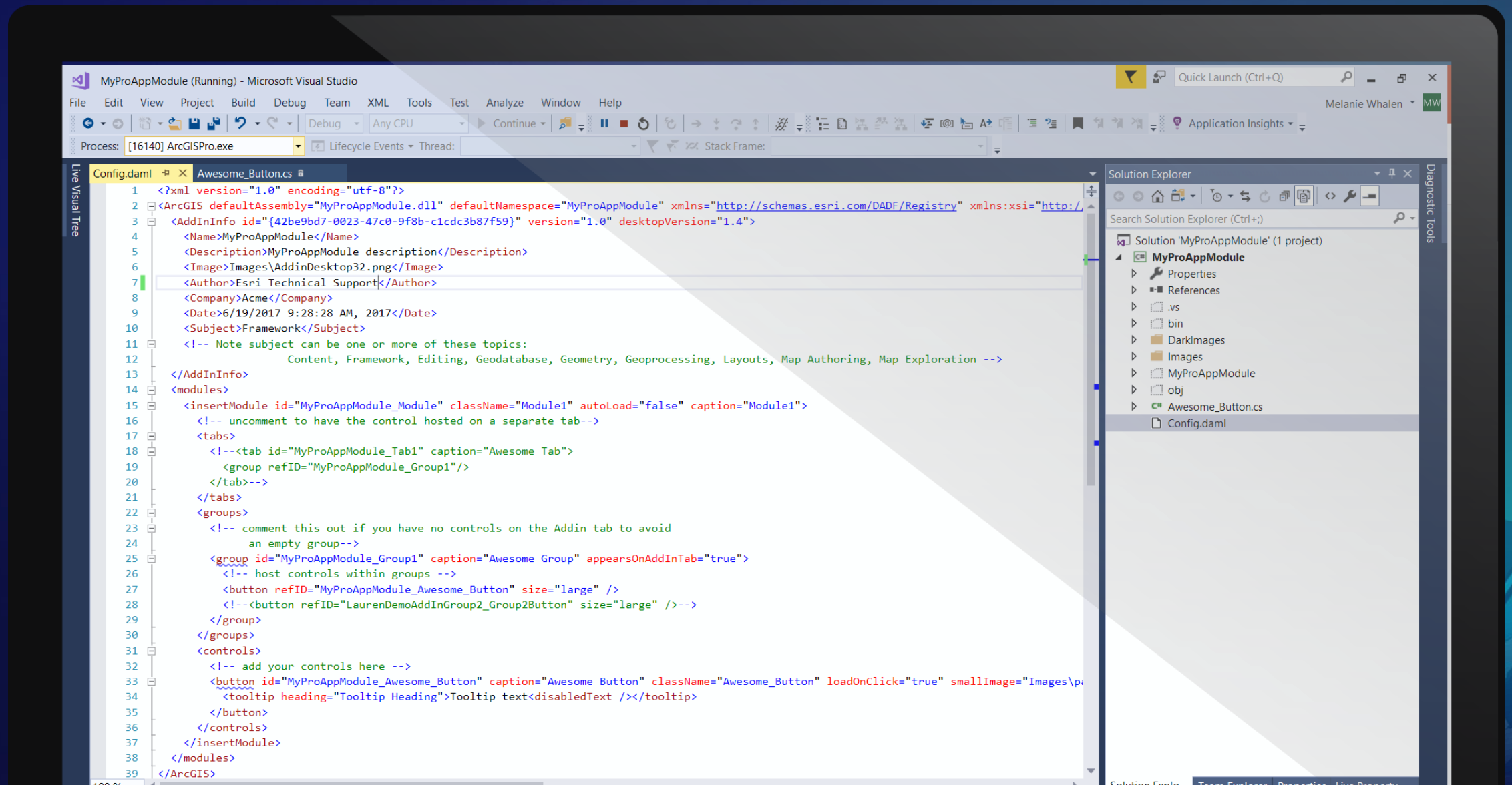

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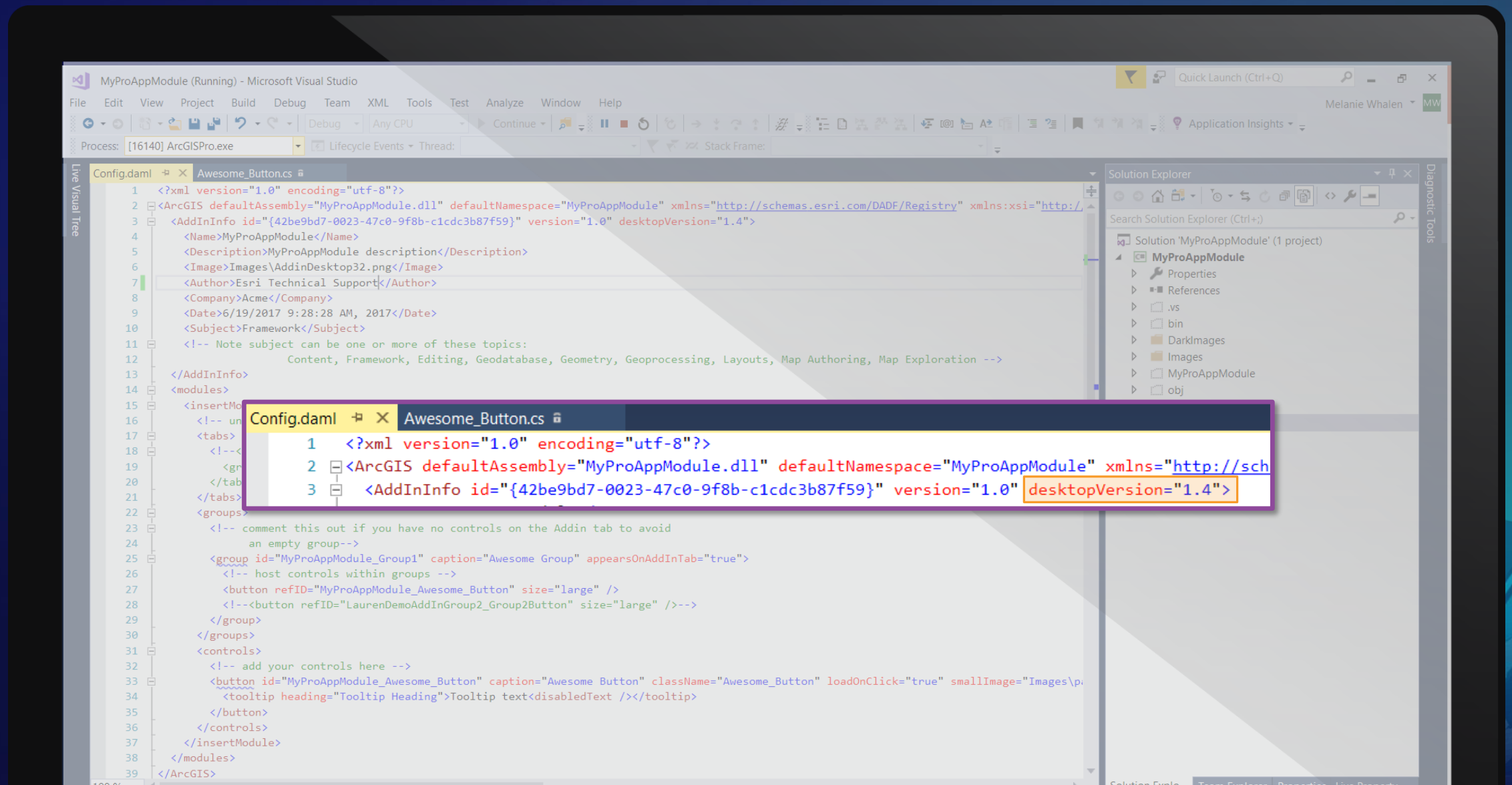
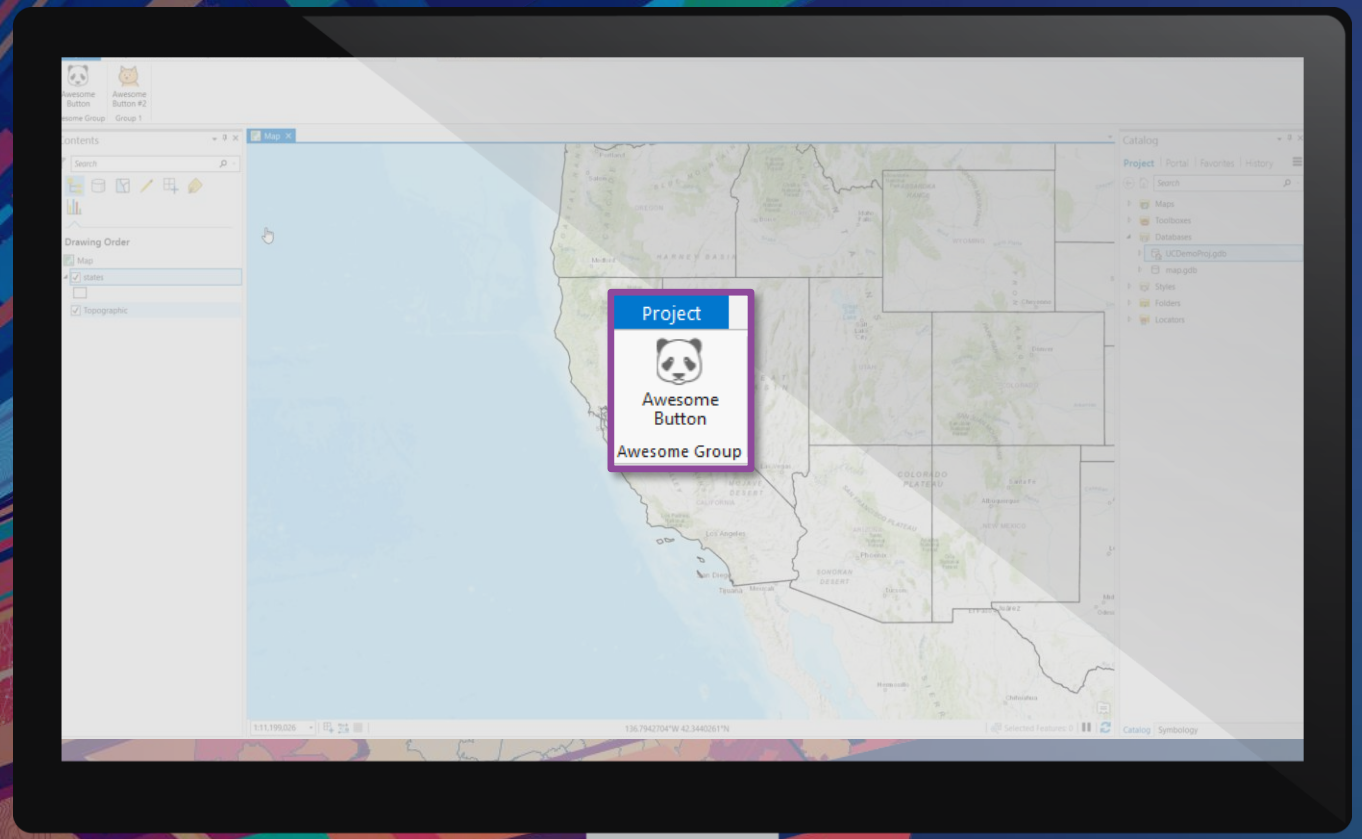


Version Compatibility

Add-Ins are:

- Forwards compatible across all minor versions of ArcGIS Pro (eg 2.0, 2.1, etc)
- Not forwards compatible across major versions of ArcGIS Pro (eg 1.x, 2.x, etc)
- Not backwards compatible across any versions of ArcGIS Pro

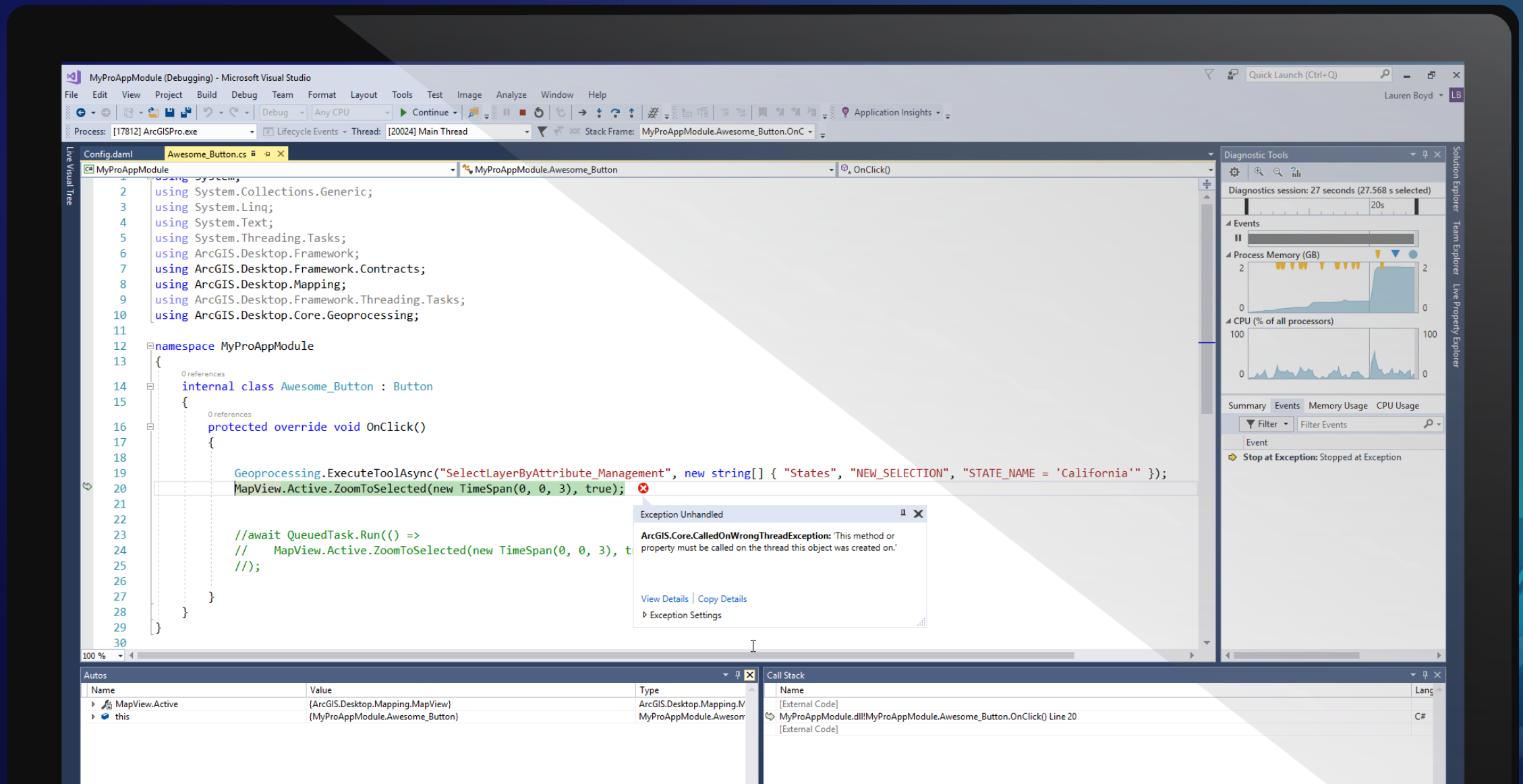
*Build number is ignored by *desktopVersion*



Configuration Issues Demo

Threading Issues

ArcGIS.Core.CalledOnWrongThreadException



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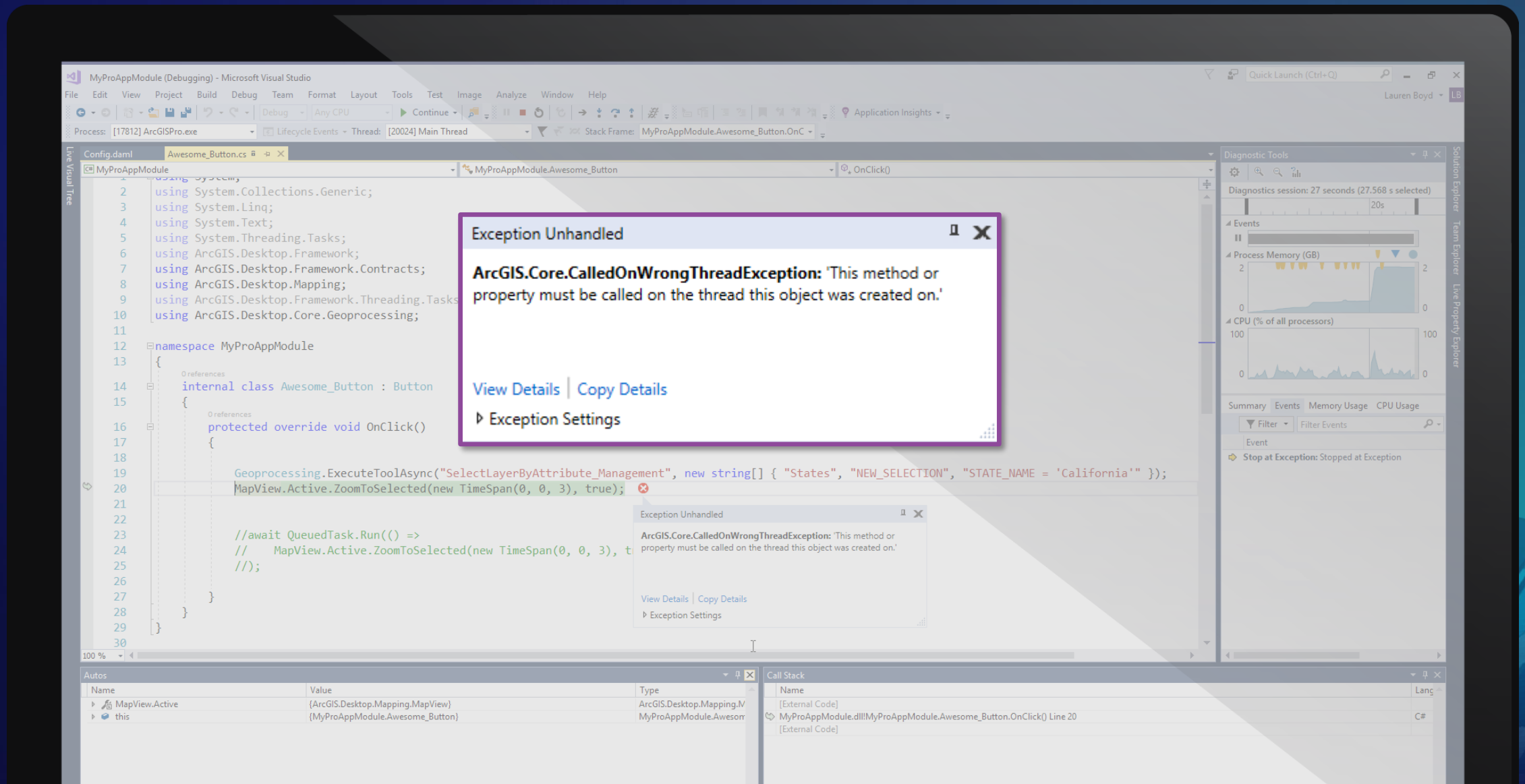

ArcGIS.Core.CalledOnWrongThreadException

- Task-based Asynchronous Pattern (TAP)
- Task Class
- Add-In Developer Threads
  1. UI Thread

     Should always remain free
  2. MCT (Main CIM Thread)

     CIM = Cartographic Information Model

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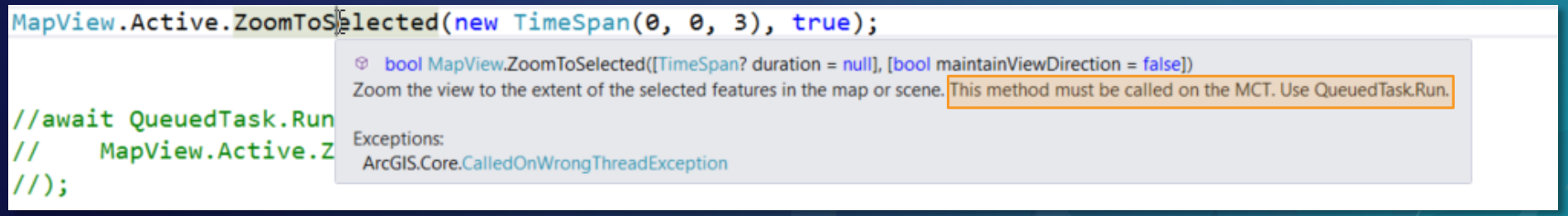

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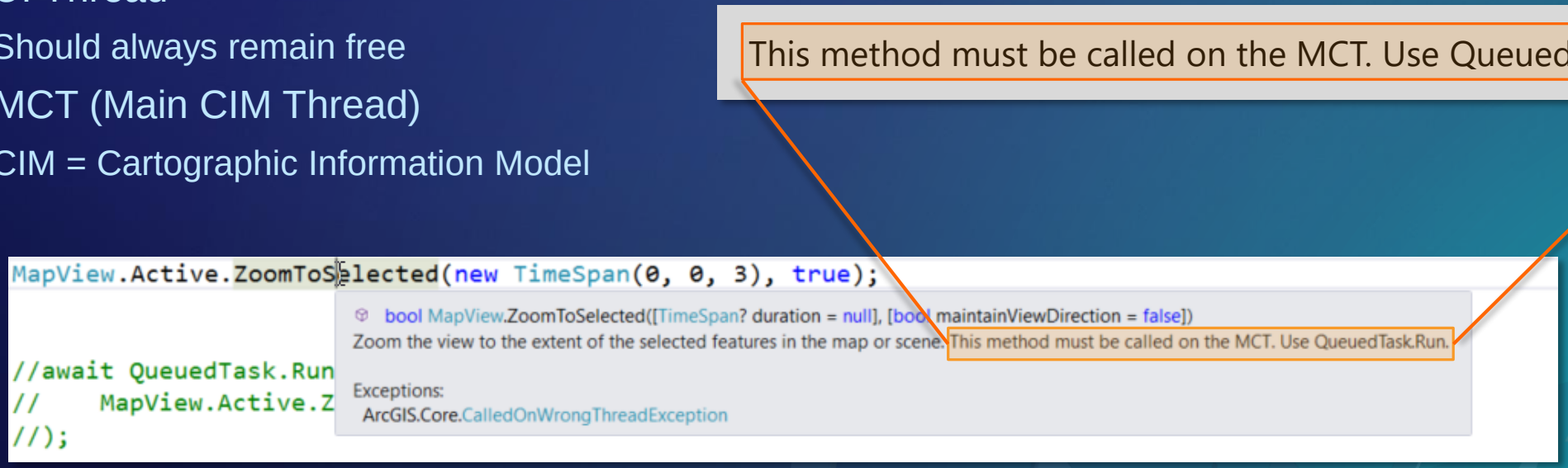
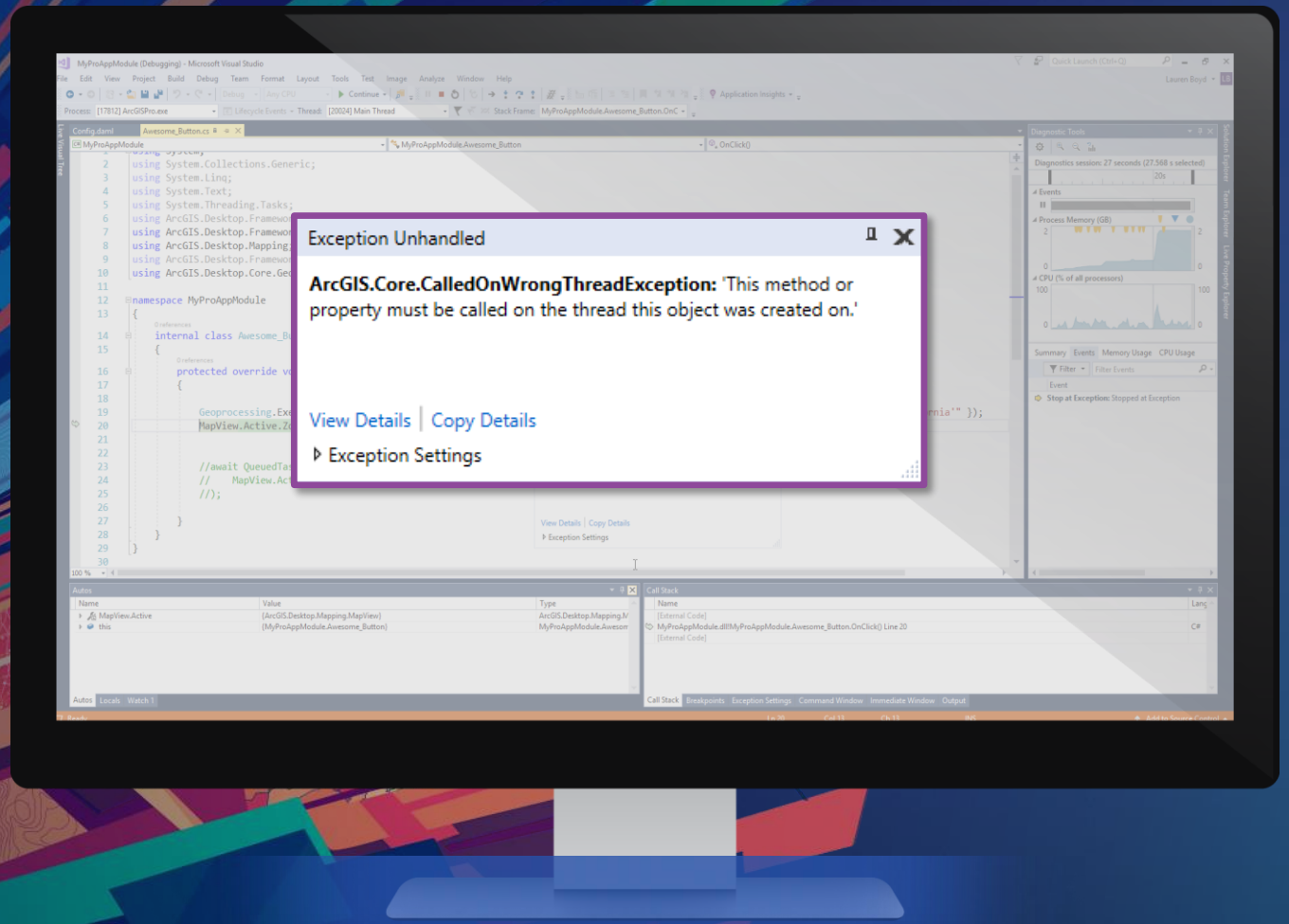




Threading Demo

Standalone Applications

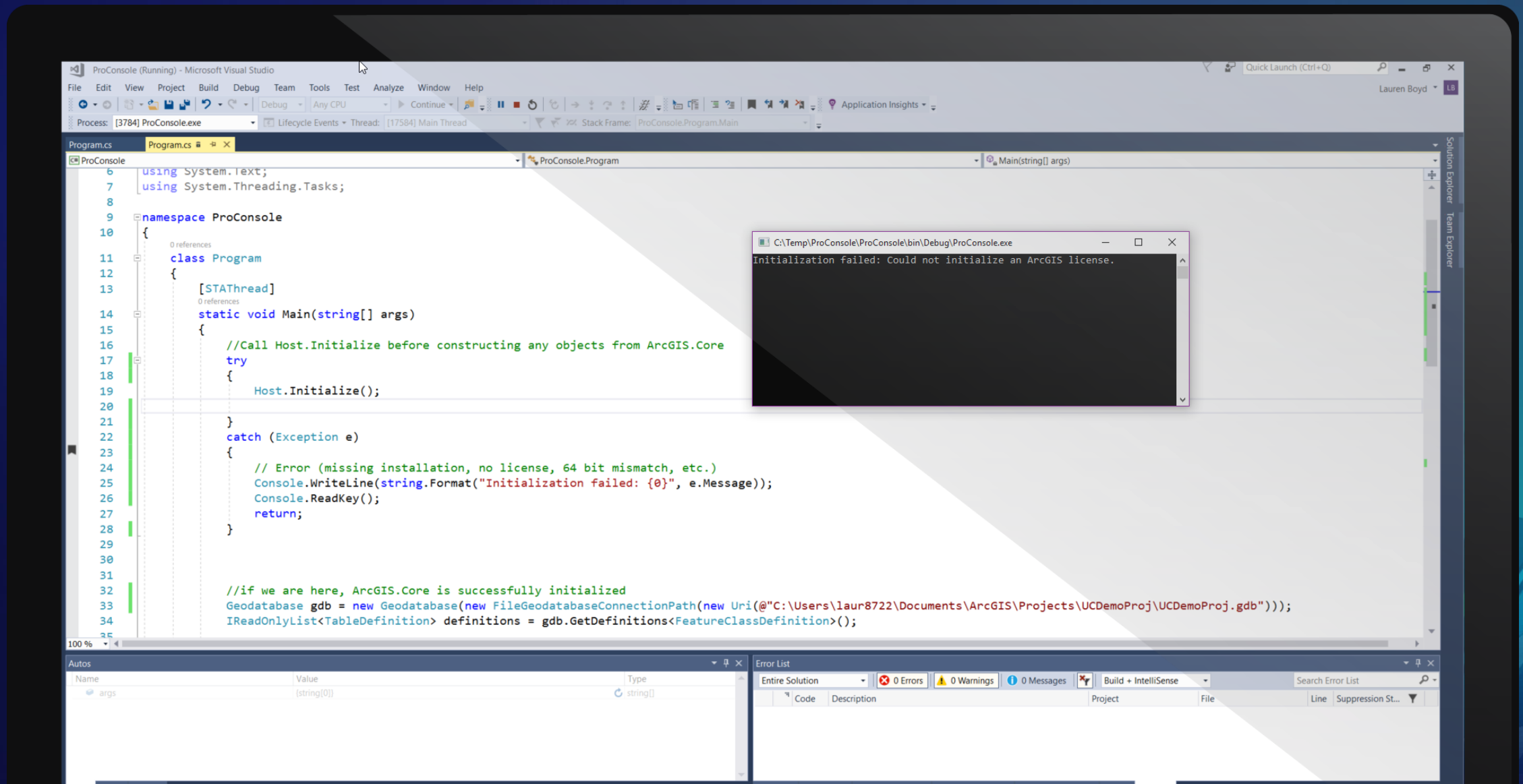
Standalone Application Issues

- Creating an ArcGIS Pro Standalone application
- Licensing errors
- Target platform errors
- Tips for standalone application development

Creating Standalone Apps

1. Create a new .NET console application
2. Add the following references to your console application:
   - ArcGIS.Core.Host.dll
   - ArcGIS.Core.dll
3. Add Host.Initialize() method to start the ArcGIS Pro Host.
4. Best Practice: Add try/catch statement around Initialization

Licensing Error



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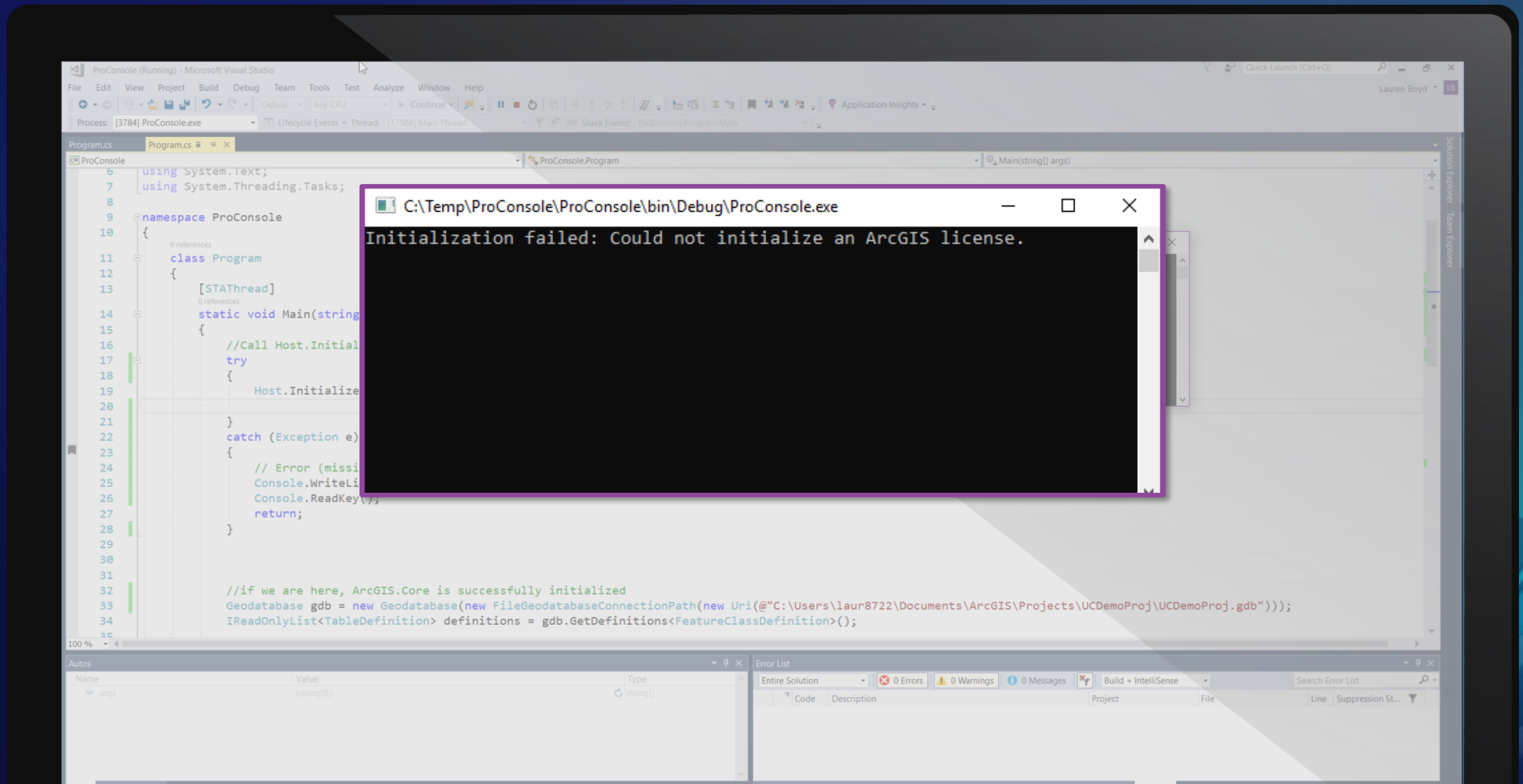
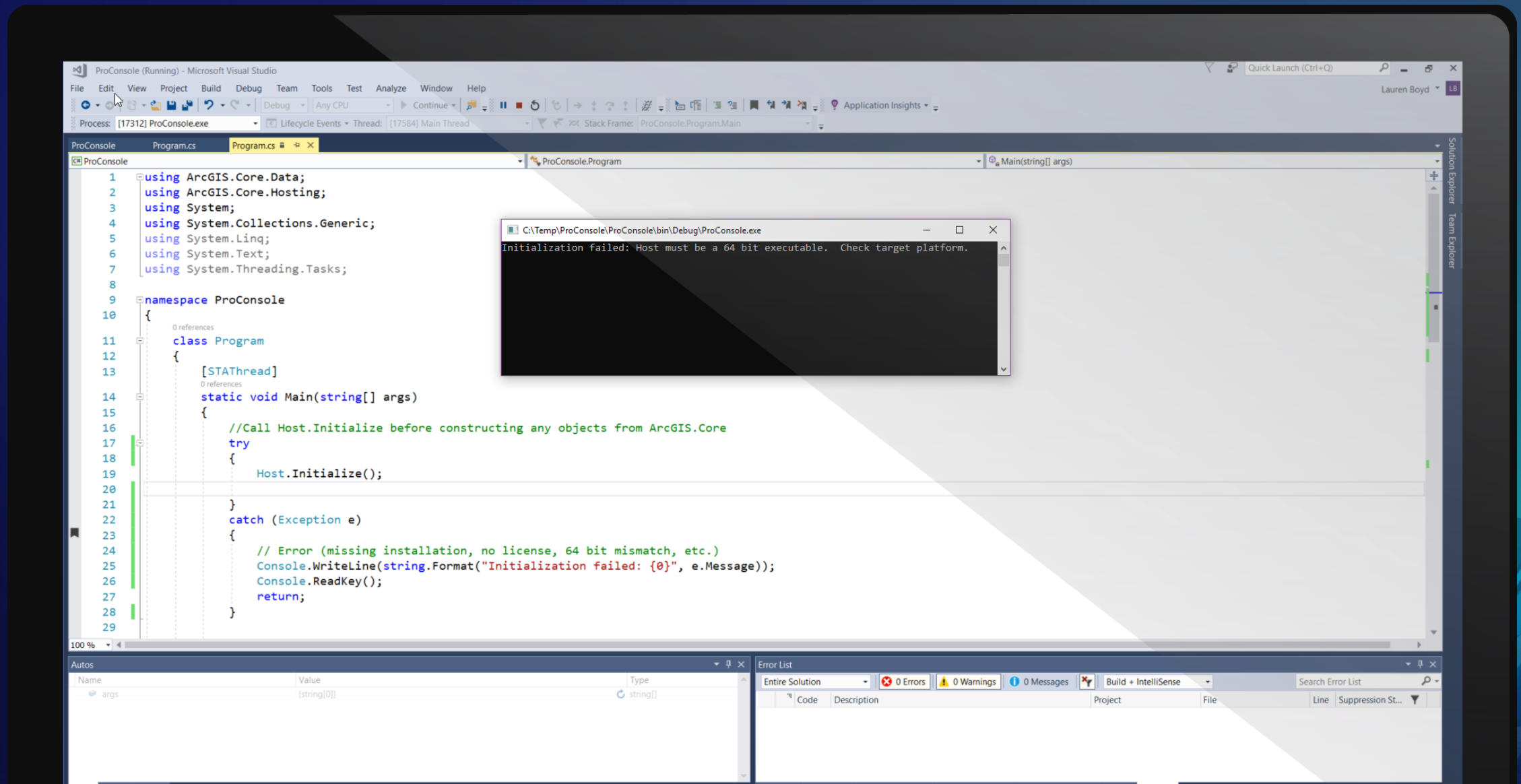


Target Platform Error



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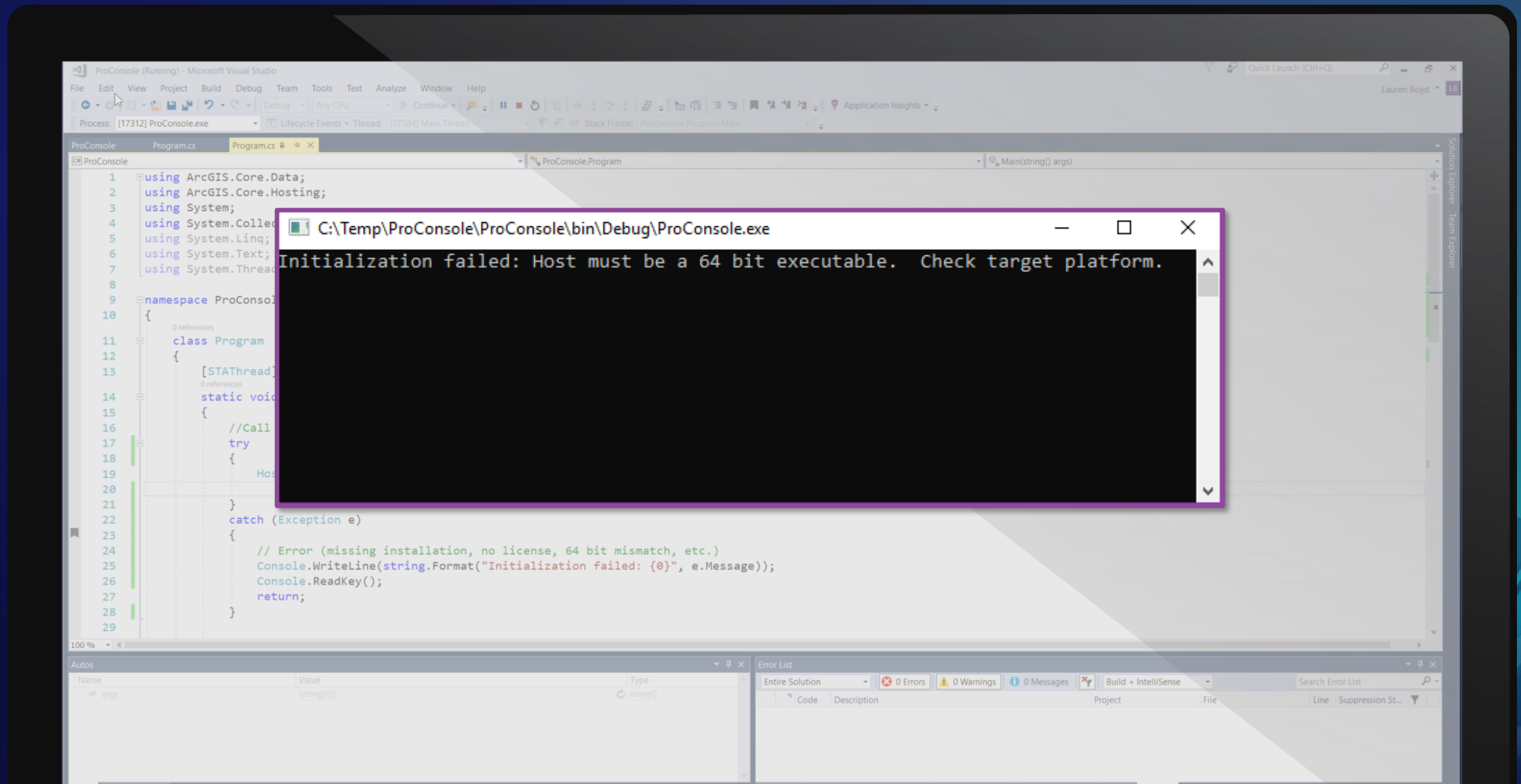
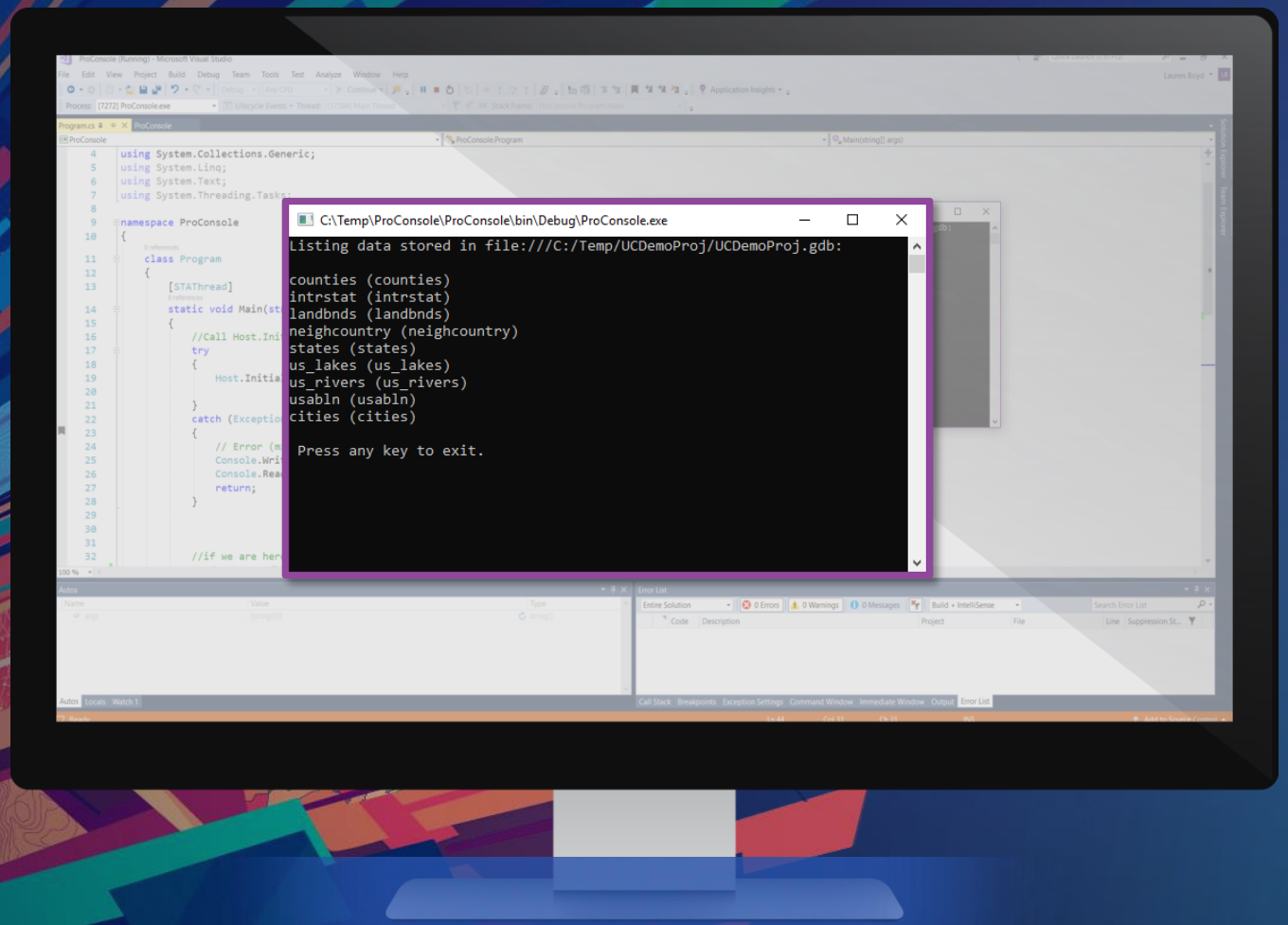


Things to Remember…

- ArcGIS Pro must be installed on host machine.
- Configure your ArcGIS Pro license.
- Make target framework 4.6.1 or higher.
- Change Platform Target combo box to be x64 in the Build properties dialog box in your project.
- Add the following references to your console application:
  - ArcGIS.Core.Host.dll
  - ArcGIS.Core.dll
- Add the [STAThread] attribute above the console's static Main(string[] args) method



Standalone Applications Demo

Troubleshooting Suggestions

Troubleshooting Suggestions

- Check ArcGIS Pro licensing
- Latest release and system requirements:
  - https://doc.arcgis.com/en/
  - https://github.com/Esri/arcgis-pro-sdk/wiki#requirements
- Existing bug/enhancements:
  - https://support.esri.com/en/
- GeoNet:
  - https://community.esri.com/welcome
- Google/Bing/etc…

Need Tech Support?

Here is what we will need to know..

- Complete environment:
  - IDE Configuration (Visual Studio version)
  - ArcGIS Product Version information (ArcGIS Pro 2.1.2)
- Sample application including source code
- Exact workflow to reproduce the issue
- Error messages

Questions?

Please Take Our Survey on the App

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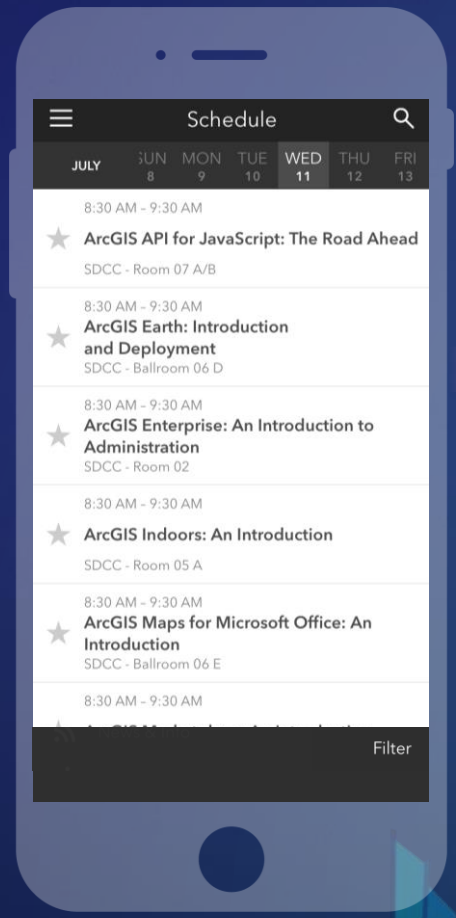
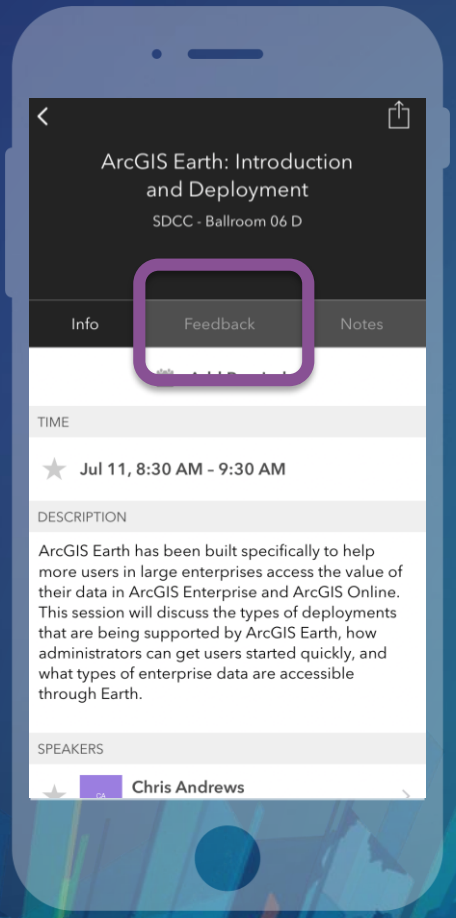
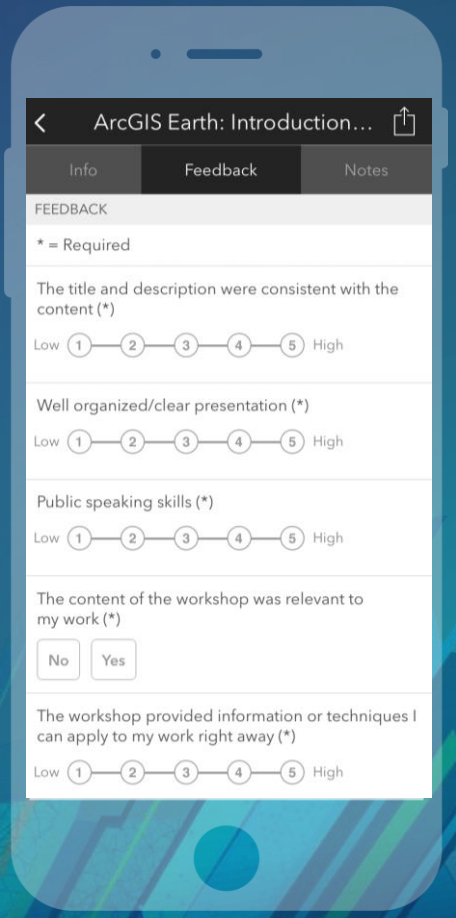
Select the session you attended



Scroll down to find the feedback section



Complete answers and select “Submit”



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