

A nighttime photograph of a city skyline reflected in water. A large suspension bridge is in the foreground, its structure and lights reflected in the calm water. In the background, several skyscrapers are illuminated, including a prominent one with a spire. The sky is dark blue, and the overall scene is a vibrant urban nightscape.

WebAssembly is the future of .Net

Using Avalonia for Cross Platform Apps



What is a WebAssembly

Use Cases

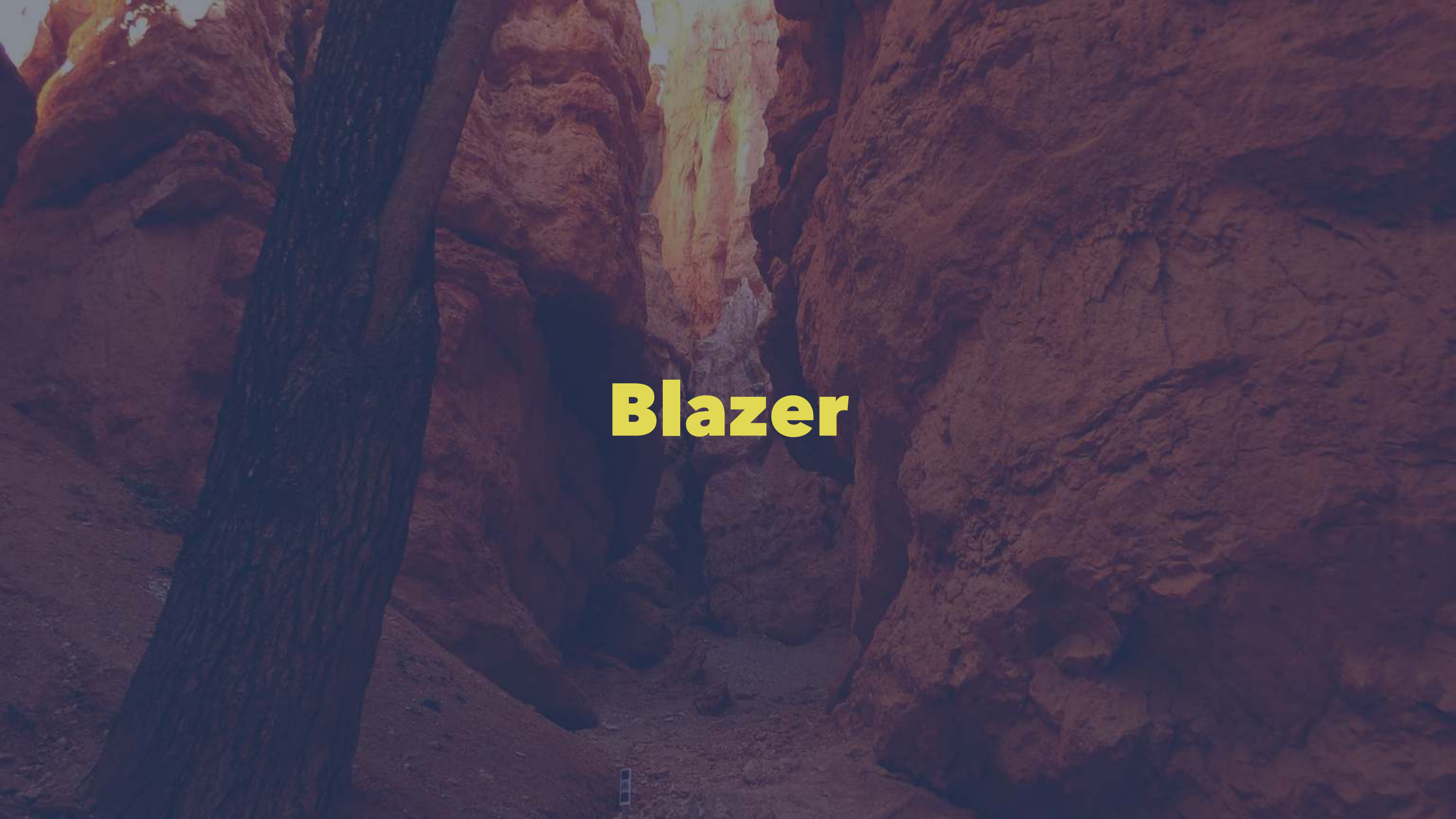
- Porting Desktop Apps
- Games
- Higher Speed Apps
- Shared code with Backend
- Eliminate Javascript



New way to deliver applications

.NET 6 New Features

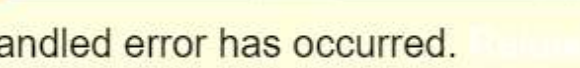
- WebAssembly AOT
- WASM runtime relinking DLL Files
- IL trimming
- Single-file apps, Mac, Linux, Windows



Blazer

Problems

- GPU Shader compilation issues
- Threading issues
- Missing libraries, Web RTC etc
- Hiring frontend C# engineers



The screenshot shows the Android Studio interface with the 'Console' tab selected. The console displays the following log messages:

- device [instrument.t...](#)
- d54e864abc5fec73f56b67edd77958ffd9af0d43def230f673c17
- b5d0f, audiooutput, Speaker/Headphone (Realtek High Definition Audio)
- selected audioinput Default - Microphone [instrument.t...](#)
- (Realtek High Definition Audio)
- selected audioutput Default - [instrument.t...](#)
- Speaker/Headphone (Realtek High Definition Audio)
- setAudioInputDevice default [instrument.t...](#)
- setAudioOutputDevice default [instrument.t...](#)
- ▶ setOutputDevice() not supported before [instrument.t...](#)
- preAuth() or join()
- setAudioInputStatus true [instrument.t...](#)
- setAudioOutputStatus true [instrument.t...](#)
- getAudioInputStatus [instrument.t...](#)
- ▶ Shader compilation error [instrument.t...](#)
- ▶ ----- [instrument.t...](#)
- ▶ 1 uniform float4 [instrument.t...](#)
- sk_RTAdjust;uniform float3x3 umatrix_Stage1_c0;in flo
- position;in half4 color;in float2 localCoord;out half
- vcolor_Stage0;out float2 vTransformedCoords_0_Stage0;
- main() { // Primitive Processor
- QuadPerEdgeAAGeometryProcessor
- ▶ 2 vcolor_Stage0 = [instrument.t...](#)
- color;sk_Position = float4(position.x , position.y, 0
- ▶ 3 vTransformedCoords_0_Stage0 = [instrument.t...](#)
- (q???)
- ▶ 4 } [instrument.t...](#)
- ▶ 5 } [instrument.t...](#)
- ▶ Errors: [instrument.t...](#)
- ▶ error: 3: expected ')' to complete [instrument.t...](#)
- expression, but found ';'.
- ▶ error: 4: expected ';', but found '}' [instrument.t...](#)
- ▶ 2 errors [instrument.t...](#)
- ▶ [instrument.t...](#)

What is Happen Space

A low-angle photograph of a brick building with a clothesline. Several pairs of shoes are hanging on the line. A small sign hanging from the line reads "FAIL". The image has a blue tint and the text "What is Happen Space" is overlaid in yellow.

- Messages
-  **Phoenix Kalindi**
Phoenix is typing ... 3
 -  **Ariel Larissa**
It was popularised in the ... 1
 -  **Lyra Cassini** 2 hours ago
At the edge of forever bits of ...

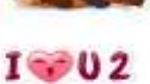




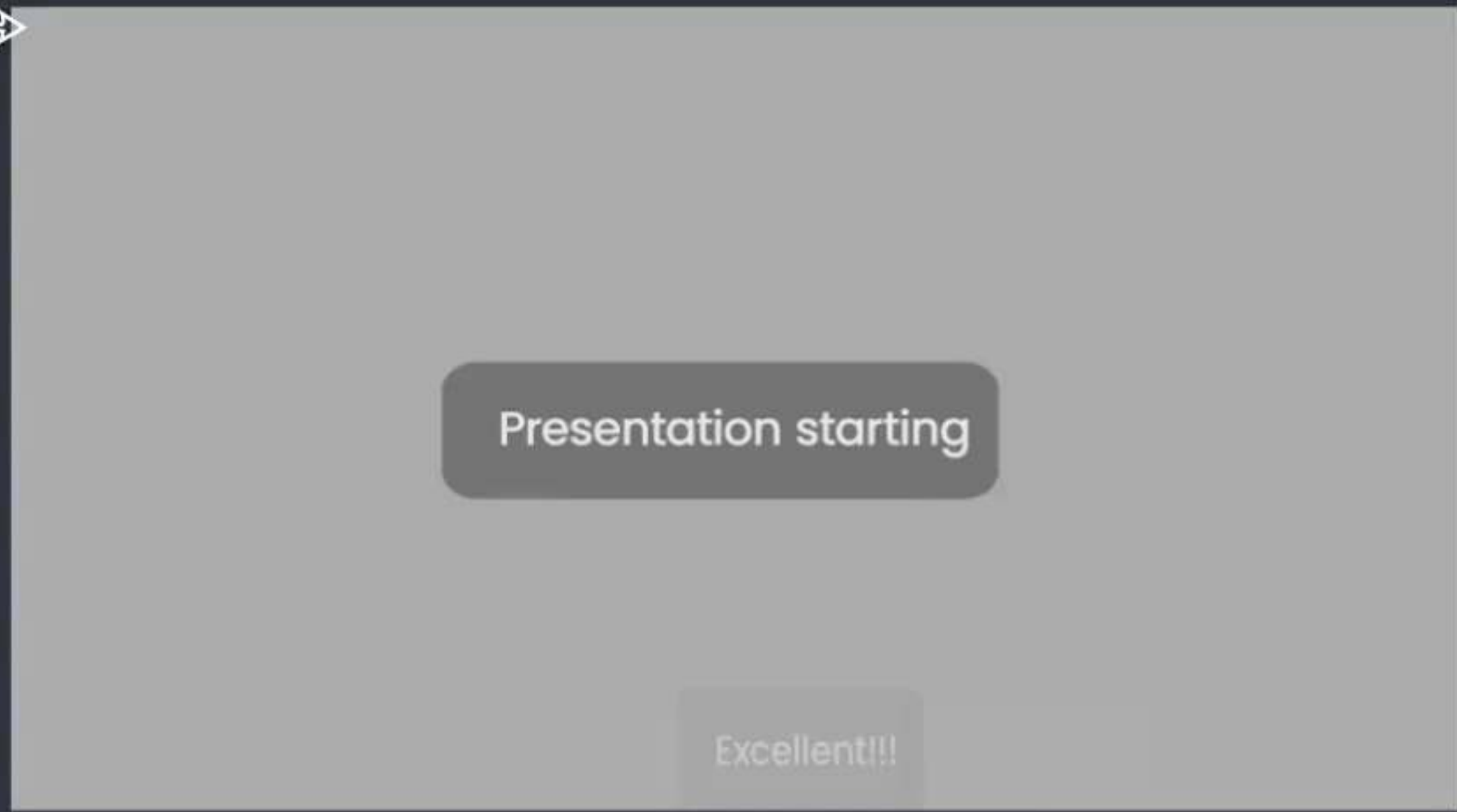












Presentation starting

Excellent!!!



Carmen



Janect



Rebeca



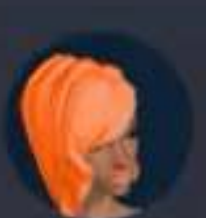
Carla



Jake



Jennifer



Alexa



Freg



Lusid



Space / Meetup



Freg

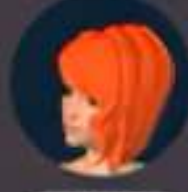




Ali



Lila



Carol

Today, Jan 28

Fred Johnson

Here's link another meetup

20 sec ago

Message "general chat"

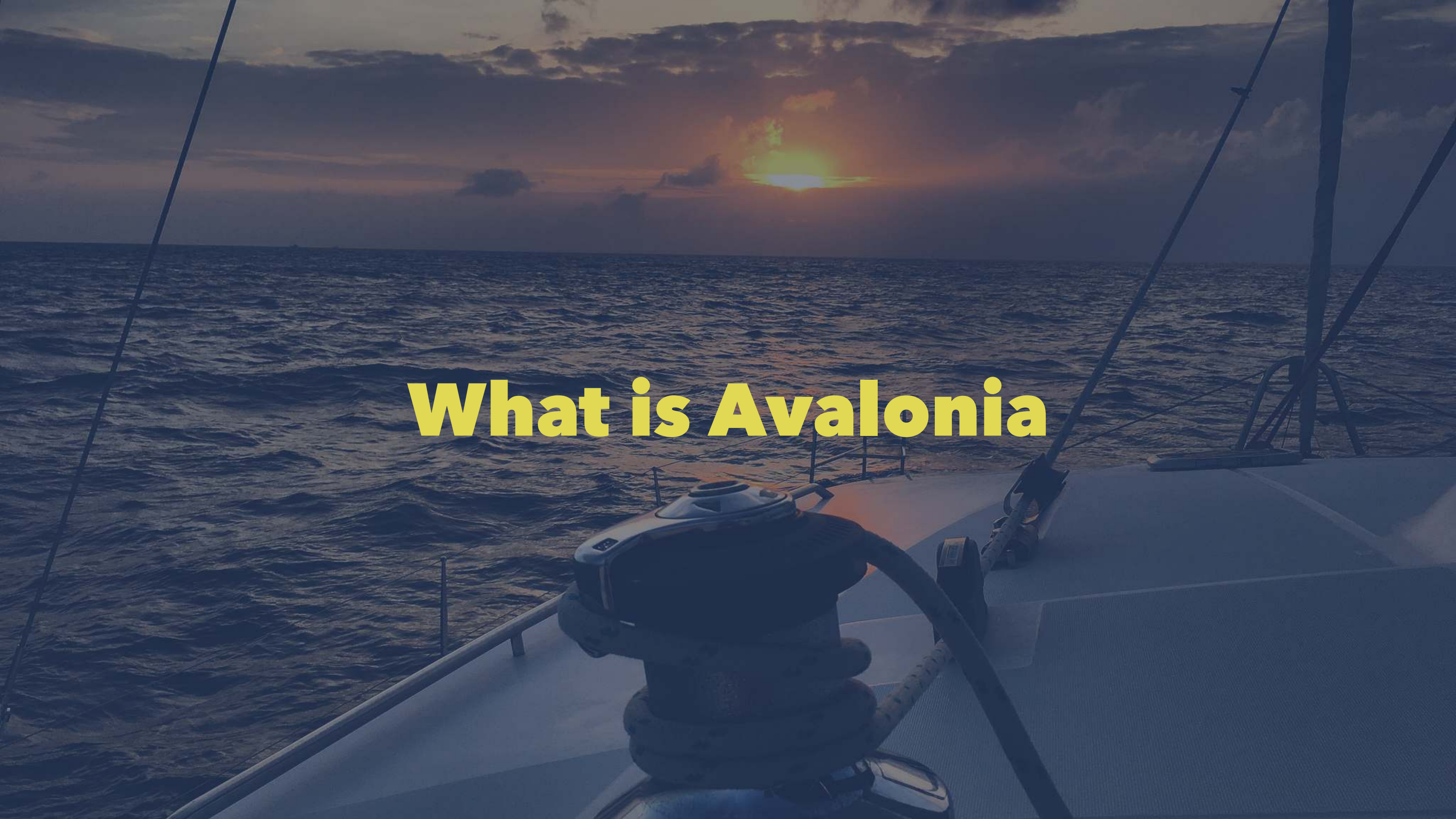
Why Build on .Net

- Real cross platform language
- Good GUI libraries unlike Rust/Go
- WASM Support baked into .net 6
- Fast runtime
- IDE works seamless on Wasm, Docker, or IOS/Android

30 seconds about me

- Founder Happen Space
- Former Founder Loom Network
- DigitalOcean - Tech Lead
- Go Developer 5 years
- Spoken all over the world
- Rode an elephant at my wedding
- ชอบพูดไทยเวลาเมา



A photograph of a sunset over the ocean, taken from the deck of a boat. The sun is low on the horizon, casting a warm glow across the sky and water. The boat's deck and rigging are visible in the foreground, and the ocean stretches to the horizon. The text "What is Avalonia" is overlaid in the center in a bold, yellow font.

What is Avalonia

Overview

Overview

Basic Input

Collections

Date and Time

Layout

Media

Menus

Navigation

Scrolling

Status and Info

Styles

Text

Buttons

Enabled button

Disabled button

Toggle button

Checkbox

☐ Unchecked☒ Checked☐ Third state☒ Disabled

Radio button

☐ Unchecked☒ Checked☐ Disabled

Date picker

day

month

year

Time picker

hour

minute

Calendar

June 2020

Mo	Tu	We	Th	Fr	Sa	Su
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Combo box

List box

Linux

Mac

Windows

Linux

Mac

Windows

Textbox

Placeholder text

Placeholder text

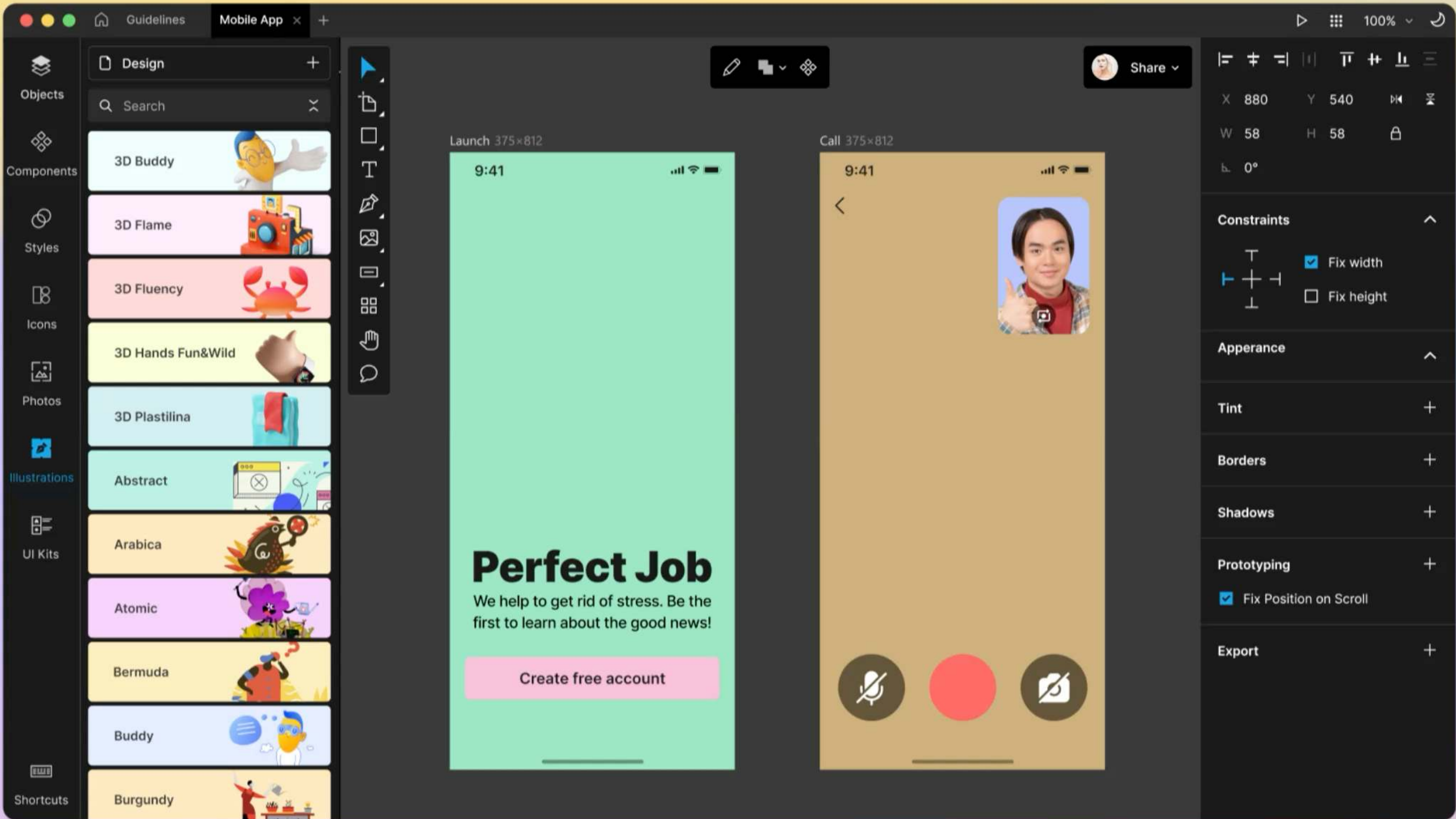
Placeholder text

Numeric up down

£0.00

Slider

Progress bar





Why not MAUI?

XAML



Window with...



Click Me!

```
<Window xmlns="https://github.com/avaloniaui"
        xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
        x:Class="AvaloniaApplication1.MainWindow"
        Title="Window with Button"
        Width="250" Height="100">

    <!-- Add button to window -->
    <Button Name="button">Click Me!</Button>

</Window>
```

Example screen

```
using Avalonia;
using Avalonia.Controls;
using Avalonia.Interactivity;
using Avalonia.Markup.Xaml;

namespace AvaloniaApplication1
{
    public class MainWindow : Window
    {
        public MainWindow()
        {
            InitializeComponent();
        }

        public void button_Click(object sender, RoutedEventArgs e)
        {
            // Change button text when button is clicked.
            var button = (Button)sender;
            button.Content = "Hello, Avalonia!";
        }

        private void InitializeComponent()
        {
            AvaloniaXamlLoader.Load(this);
        }
    }
}
```



Avatar Setup

Display Name

Matt

Avatar



Change Avatar

Configure Audio Devices



Dropdown menu for selecting an audio device, currently showing a blank space with a downward arrow icon.



Mute Microphone

Join

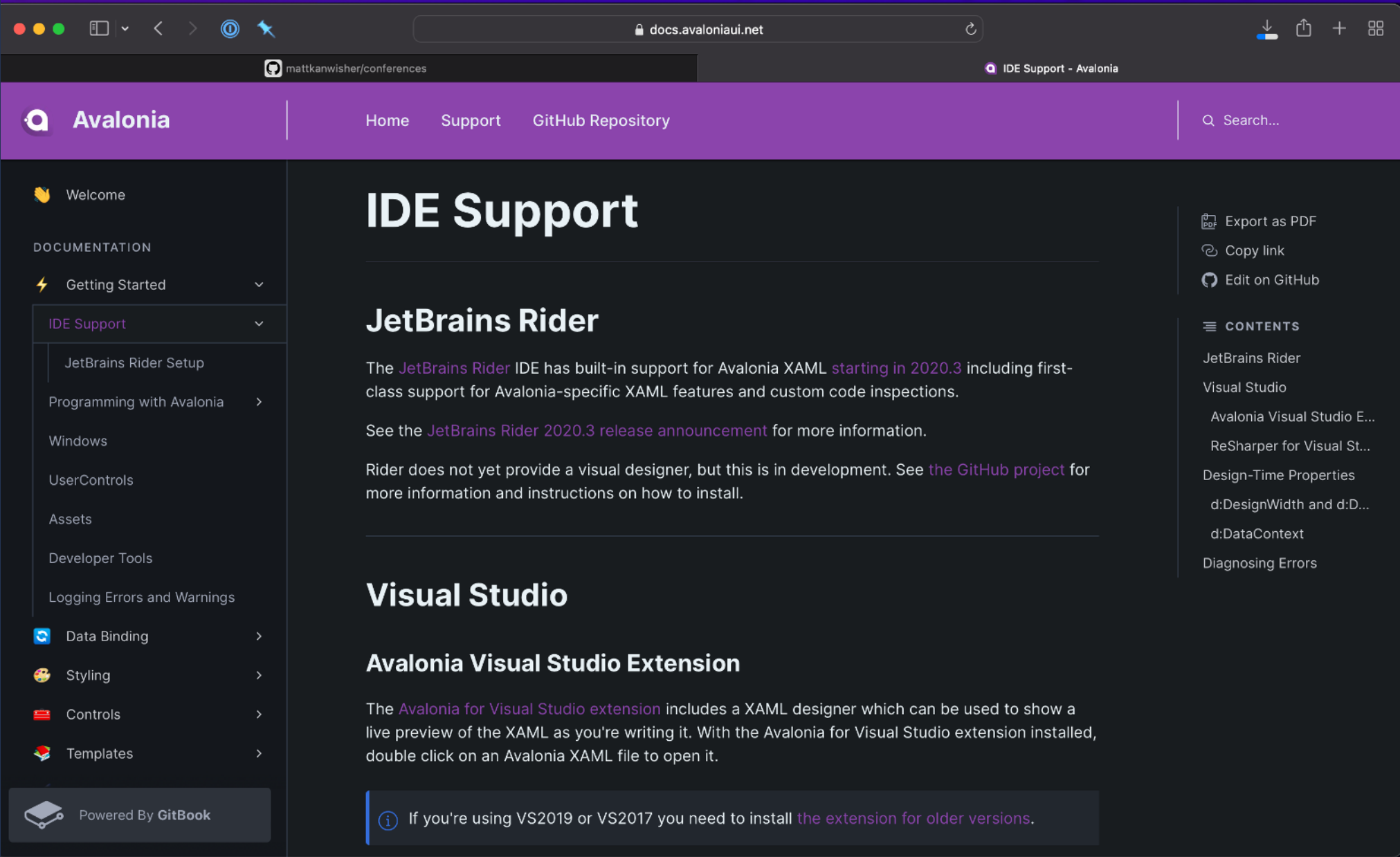
Features of Avalonia

- WASM Ready
- IOS / Android Mobile support
- Easy to port existing WPF code
- Windows / OSX Native support
- Fully open source, easy to hack on
- Fast, Light

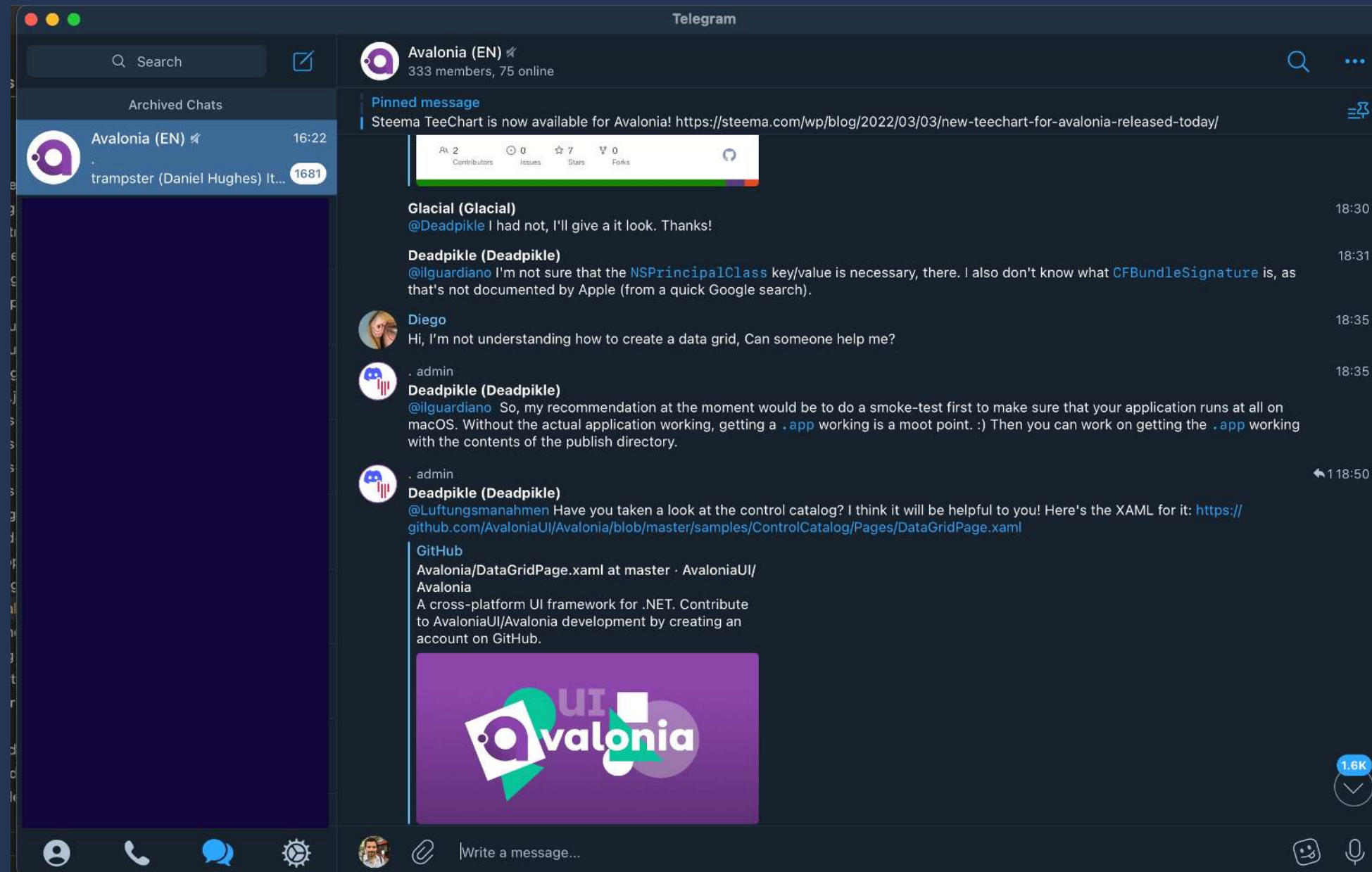


Awesome how do I start?

Docs Website



Telegram Room



<https://github.com/AvaloniaUI/Wordle-onia>

README.md

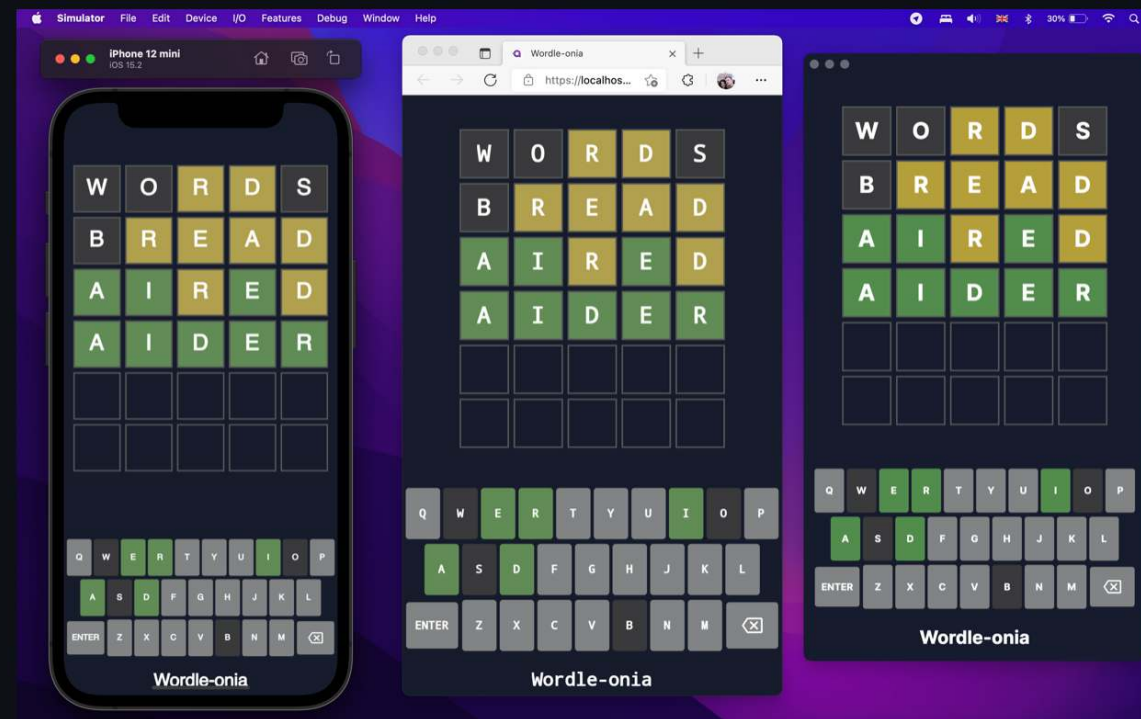
Wordle-onia

Wordle-onia is a port of Wordle to Avalonia.

Much of the code is based on <https://github.com/xEsteem/WPFordle>

Wordle-onia is a simple application that shows Avalonia running on Desktop, Mobile and Web.

For instructions on how to prepare your system to build for mobile follow the documentation at:
<https://docs.avaloniaui.net/tutorials/developing-for-mobile>



A photograph of a sailboat on the ocean at sunset. The sun is low on the horizon, casting a warm glow over the water and sky. The boat's deck and rigging are visible in the foreground. The text "Mac Development" is overlaid in a bold, yellow font.

Mac Development

MetaVerseChat – BaseControl.cs

← → delay-load-video ↩ ↲ ✓ ⋮ 🔍 Search everywhere

Debug | Any CPU MetaVerseChat.Desktop ↺ ↻ ⏏

Solution

MetaVerseChat · 6 projects

Solution Items

MetaVerseChat

MetaVerseChat.Avalonia

Dependencies

Properties

Converters

Resources

Themes

ChatClientTheme.axaml

Views

Chat

Navigation

Spaces

AuthView.axaml

C# BaseControl.cs

C# BaseWindow.cs

MainView.axaml

MainWindow.axaml

SettingsView.axaml

SpaceView.axaml

StageView.axaml

StartupView.axaml

WorkspaceView.axaml

App.axaml

MetaVerseChat.Avalonia.csproj.DotSettin

C# NewtonsoftJsonSuspensionDriver.cs

C# ViewLocator.cs

MetaVerseChat.Desktop

MetaVerseChat.iOS

Dependencies

BaseControl.cs

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

using ...

namespace MetaVerseChat.Avalonia.Views;

/// <summary>

/// Workaround for model activation

/// </summary>

25 usages 25 inheritors LobsterUberlord

public class BaseControl<TViewModel> : ReactiveUserControl<TViewModel>

where TViewModel : class

{

1 usage LobsterUberlord

public BaseControl(bool activate = true)

{

if (activate)

{

this.WhenActivated(block: disposables :CompositeDisposable =>

{

Disposable.Create(dispose: () => { }).DisposeWith(disposables);

});

}

}

}

IL Viewer

Database

Run: ↺ ⏏

selected audioinput

selected audioutput

Git

Run

TODO

Problems

Dynamic Program Analysis

Unit Tests

Terminal

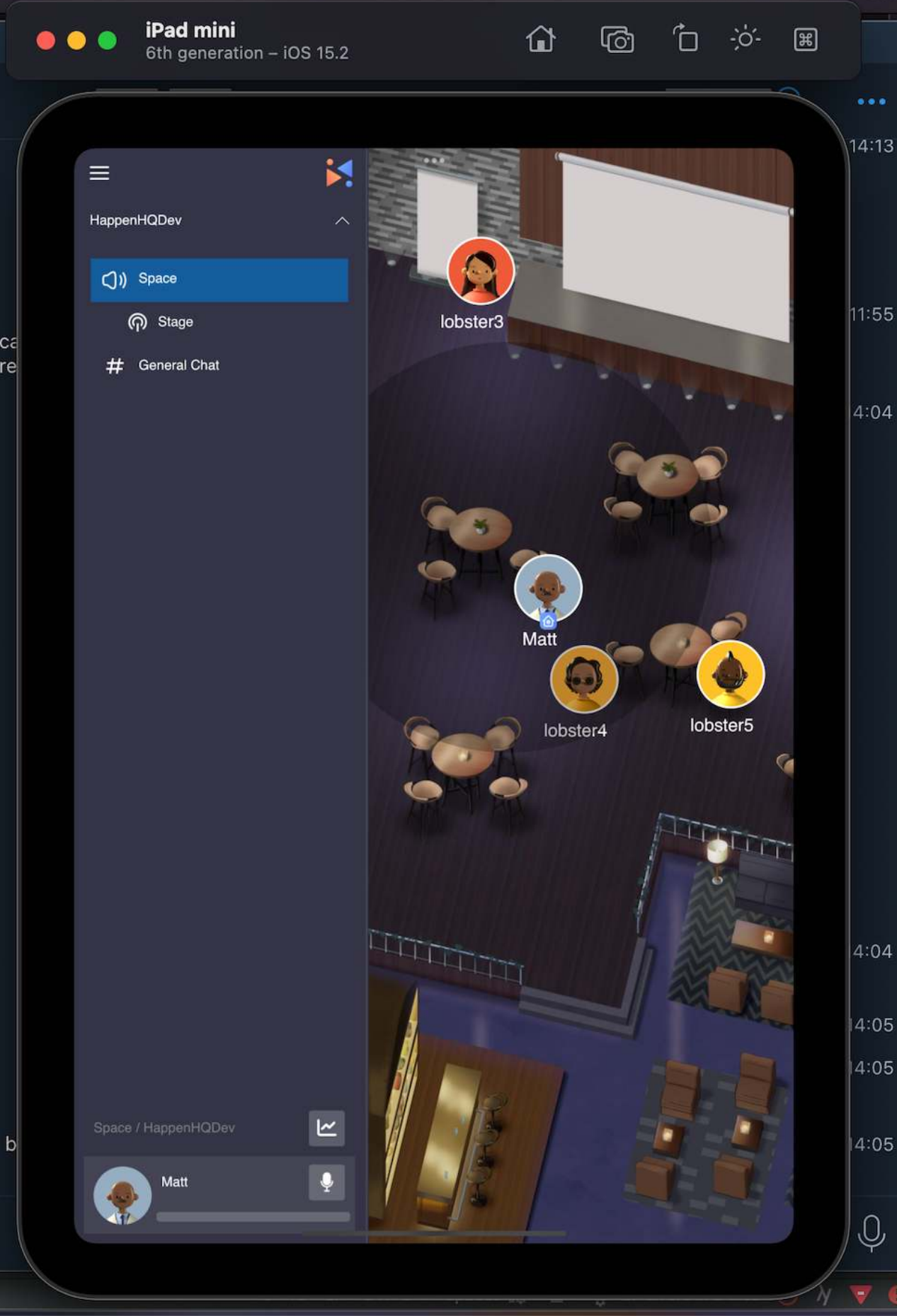
NuGet

Endpoints

Build

Build succeeded with warnings at 4:20:49 PM (33 minutes ago)

21:10 LF UTF-8 4 spaces 27 errors in 8 files



Problems

- Still early tech, issues in core C# at times
- Debugging lots of libraries
- C# is missing some desktop libraries still
- Webcam, WebRTC, Cross Platform Audio

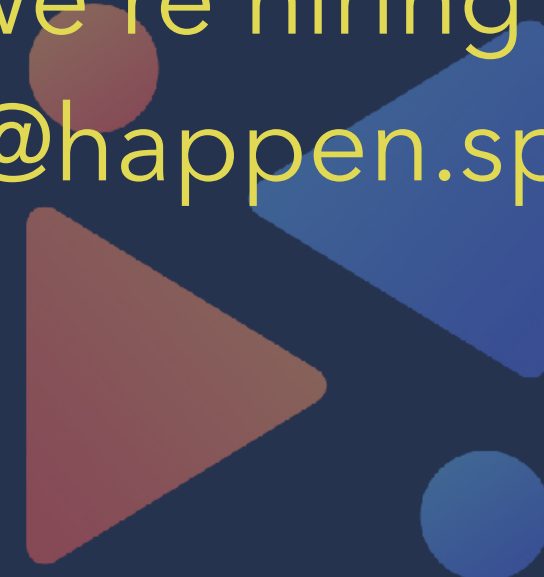
Take Aways

- WebAssembly in .Net 6 works for production apps
- MAUI is not ready
- .NET is great for Mobile Apps
- Avalonia framework is one of the best frameworks
- Get started in a few minutes

FAIL

Questions?

- Yes we're hiring C# devs in Bangkok and Remote - jobs@happen.space

The logo for 'Happen' features a stylized play button icon composed of a red triangle pointing right, a blue triangle pointing left, and a blue circle in the center. The word 'Happen' is written in a large, light blue, sans-serif font to the right of the icon.

Happen

TURN EVENTS INTO COMMUNITIES