

Techorama

ALL-STAR SPORTS EDITION

Creating Data-Driven .NET MAUI Apps



Hello my name is Mark

 Mark Allibone

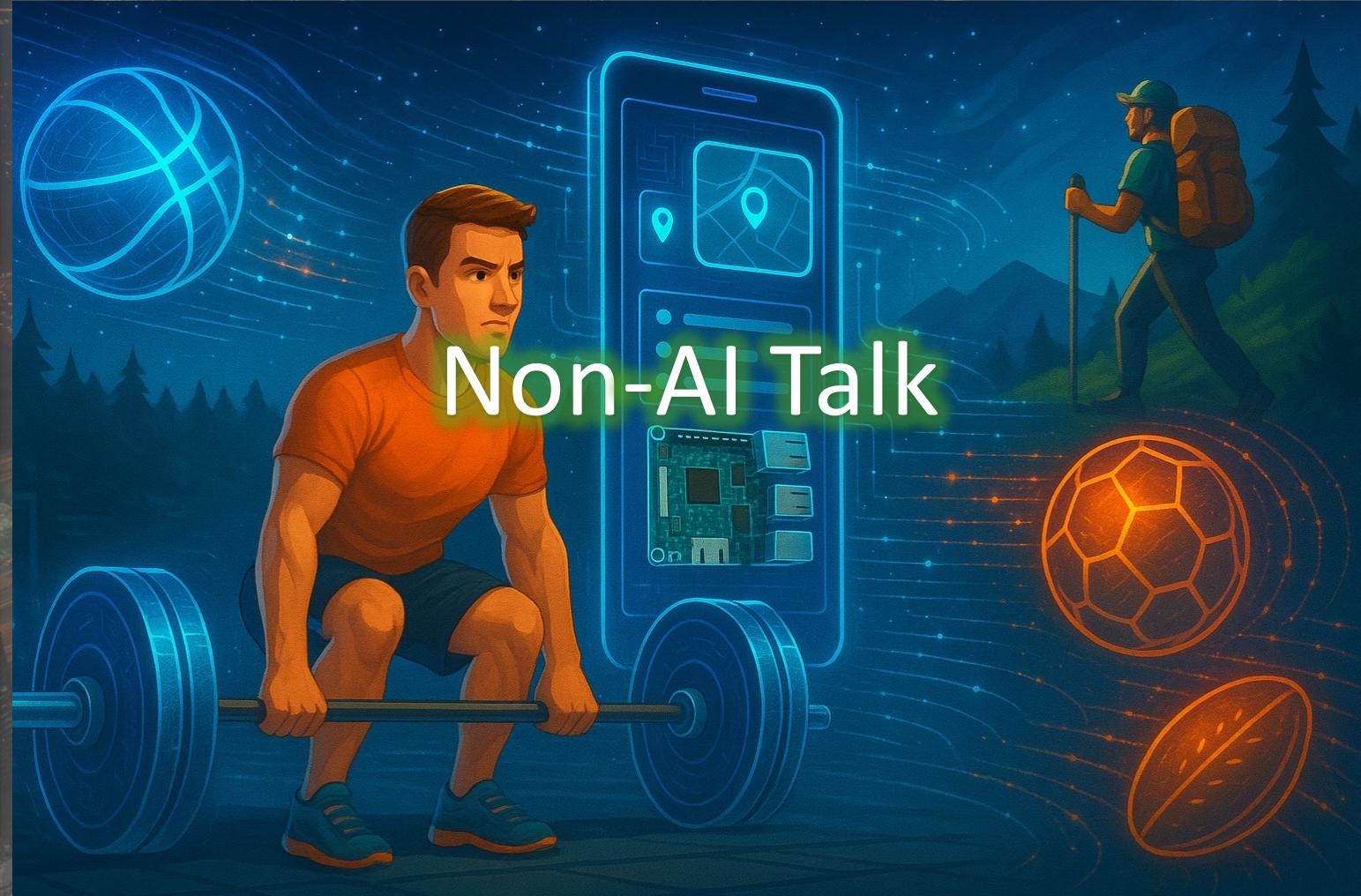
 iDIP Solution

 @mallibone.com

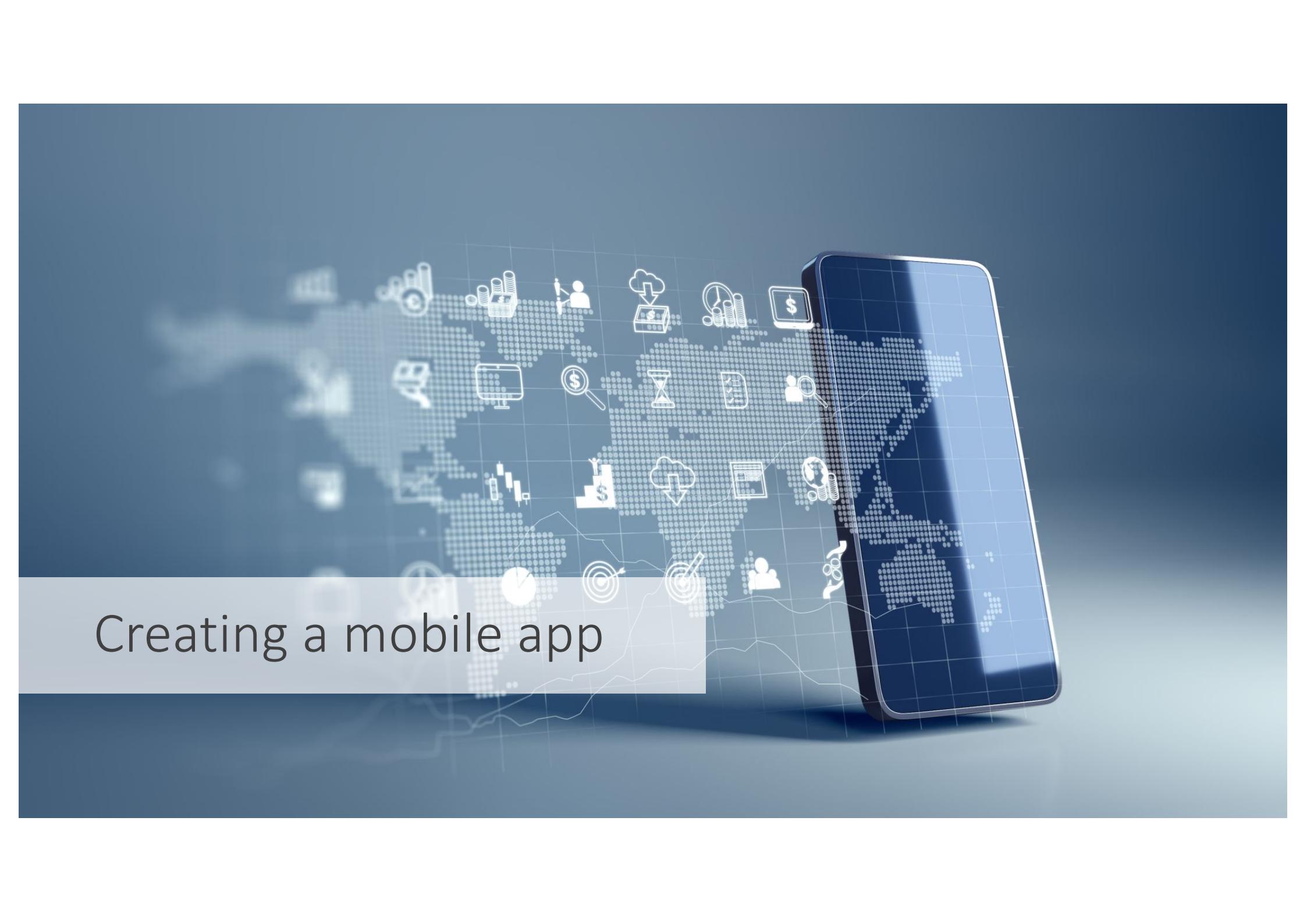
 <https://mallibone.com>

 <https://nullpointers.io>

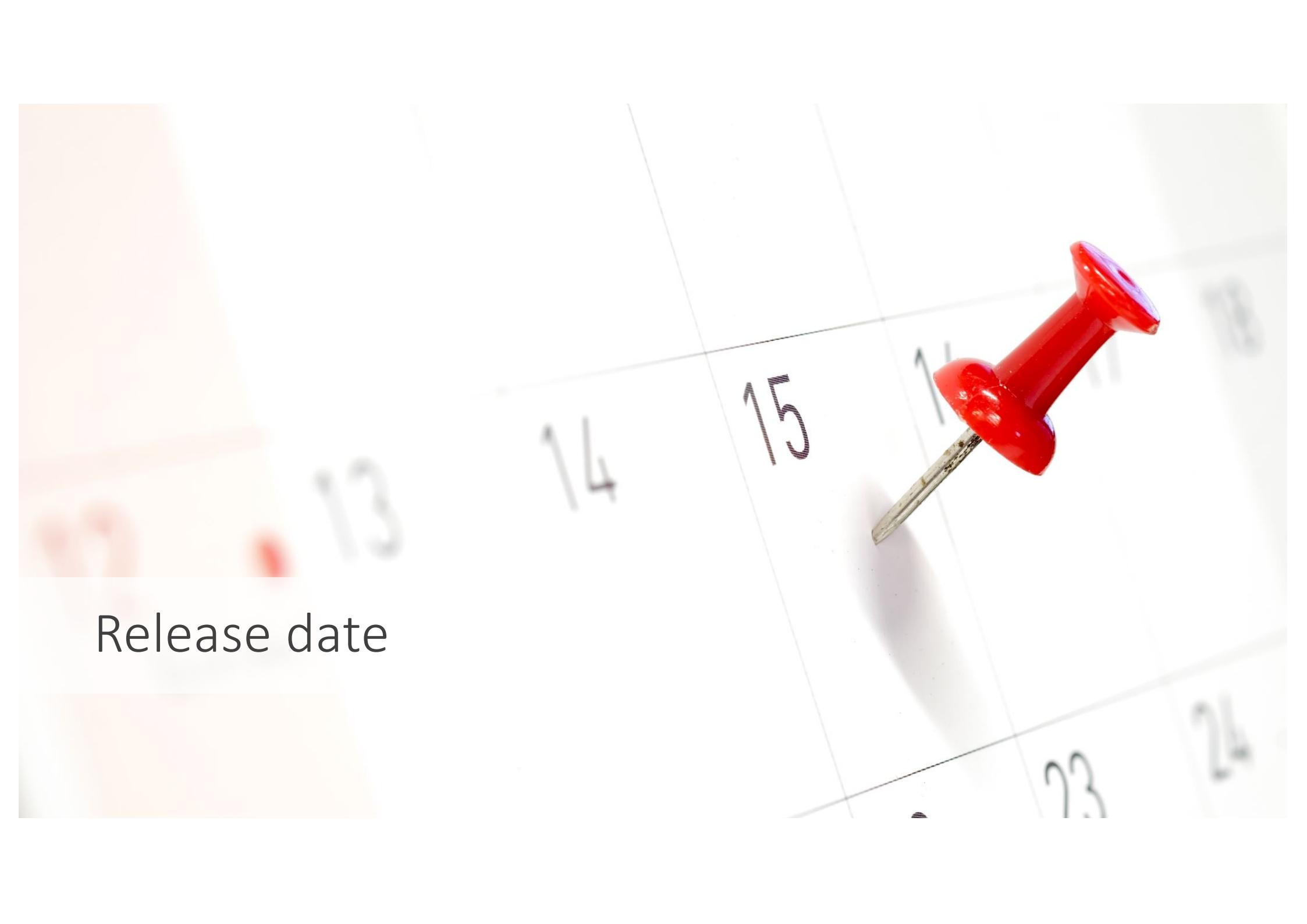




@mallibone



Creating a mobile app



Release date

15

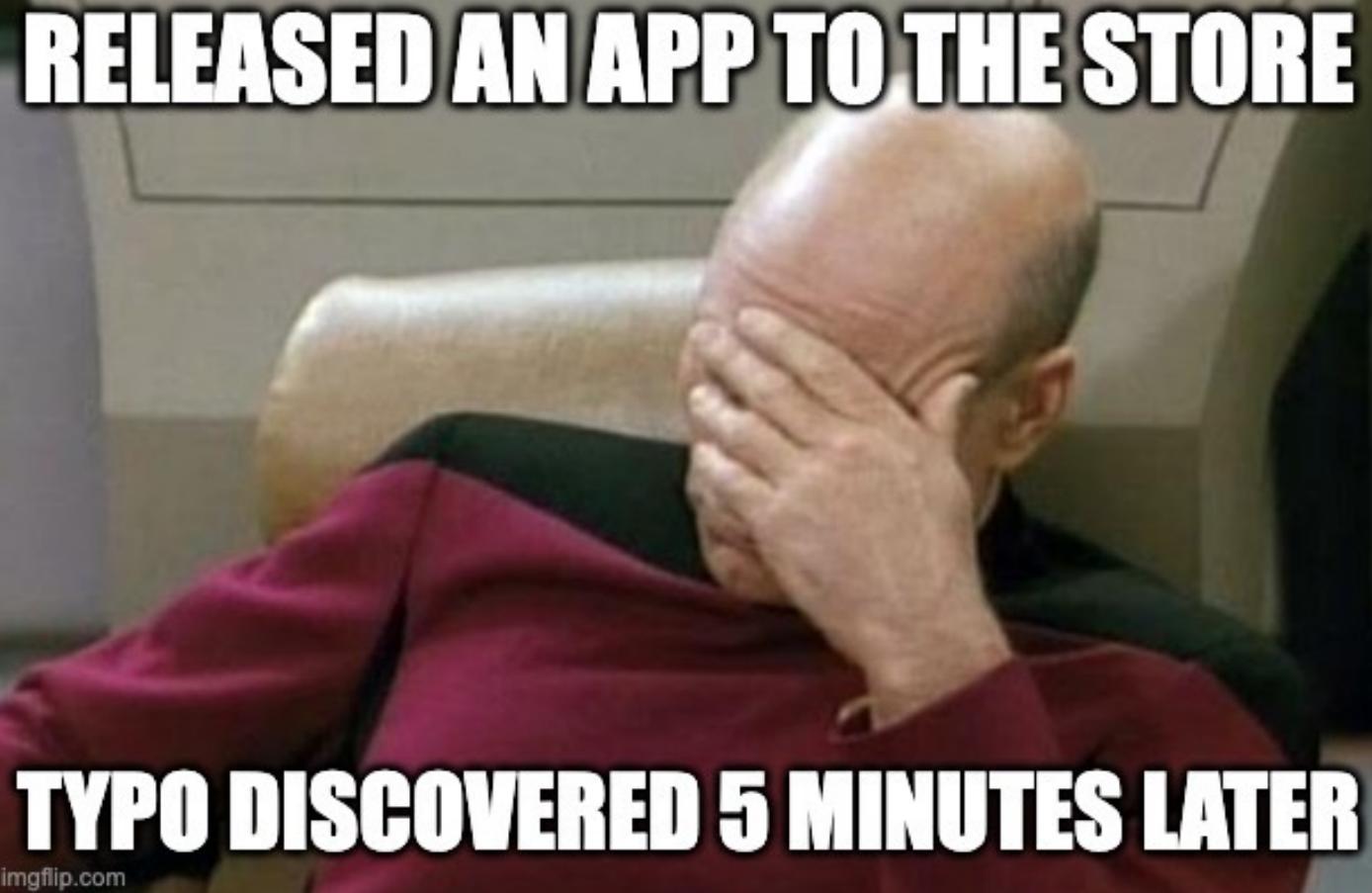


Download in de
App Store



ONTDEK HET OP
Google Play

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RELEASED AN APP TO THE STORE

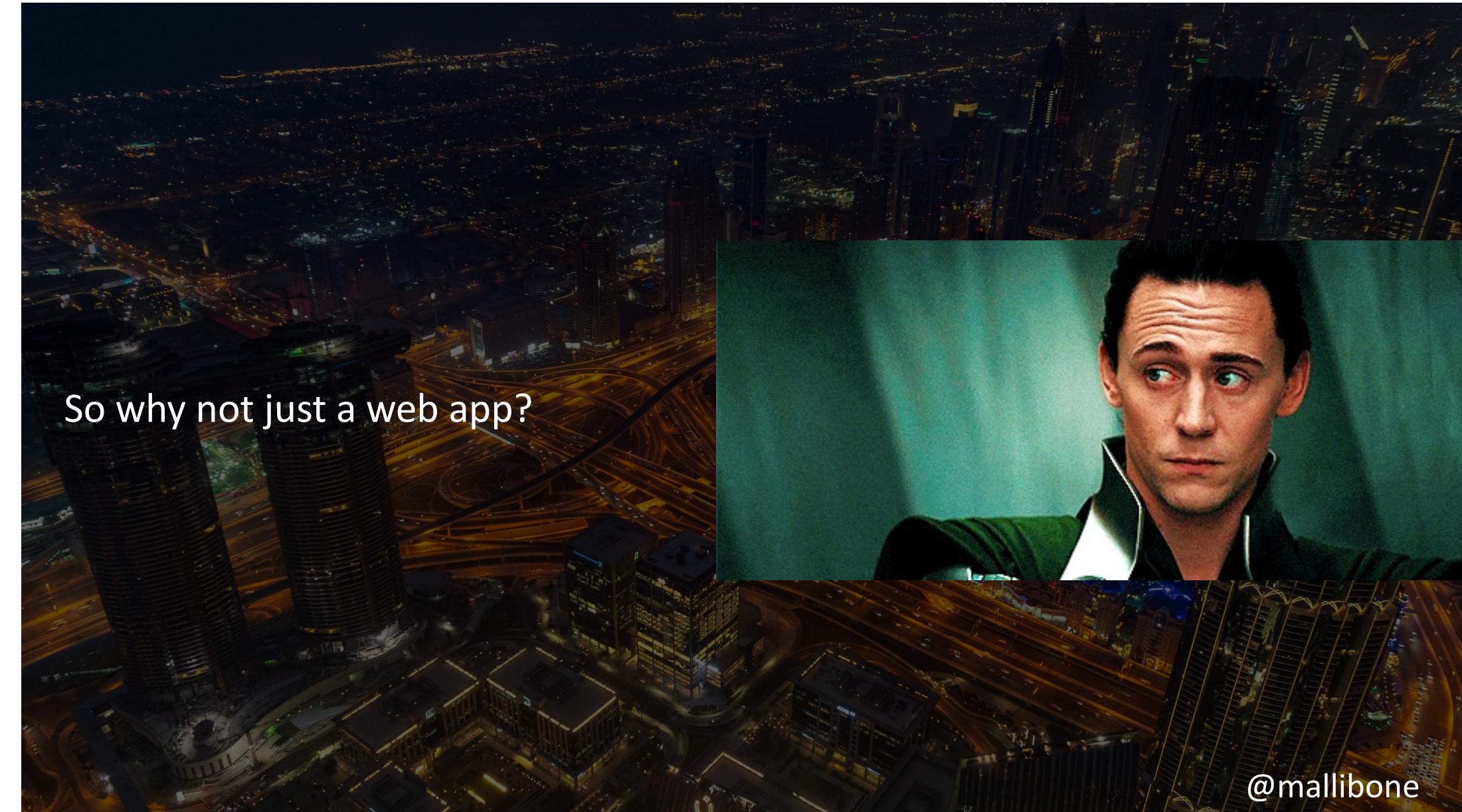
TYPO DISCOVERED 5 MINUTES LATER

imgflip.com

@mallibone

Update Content





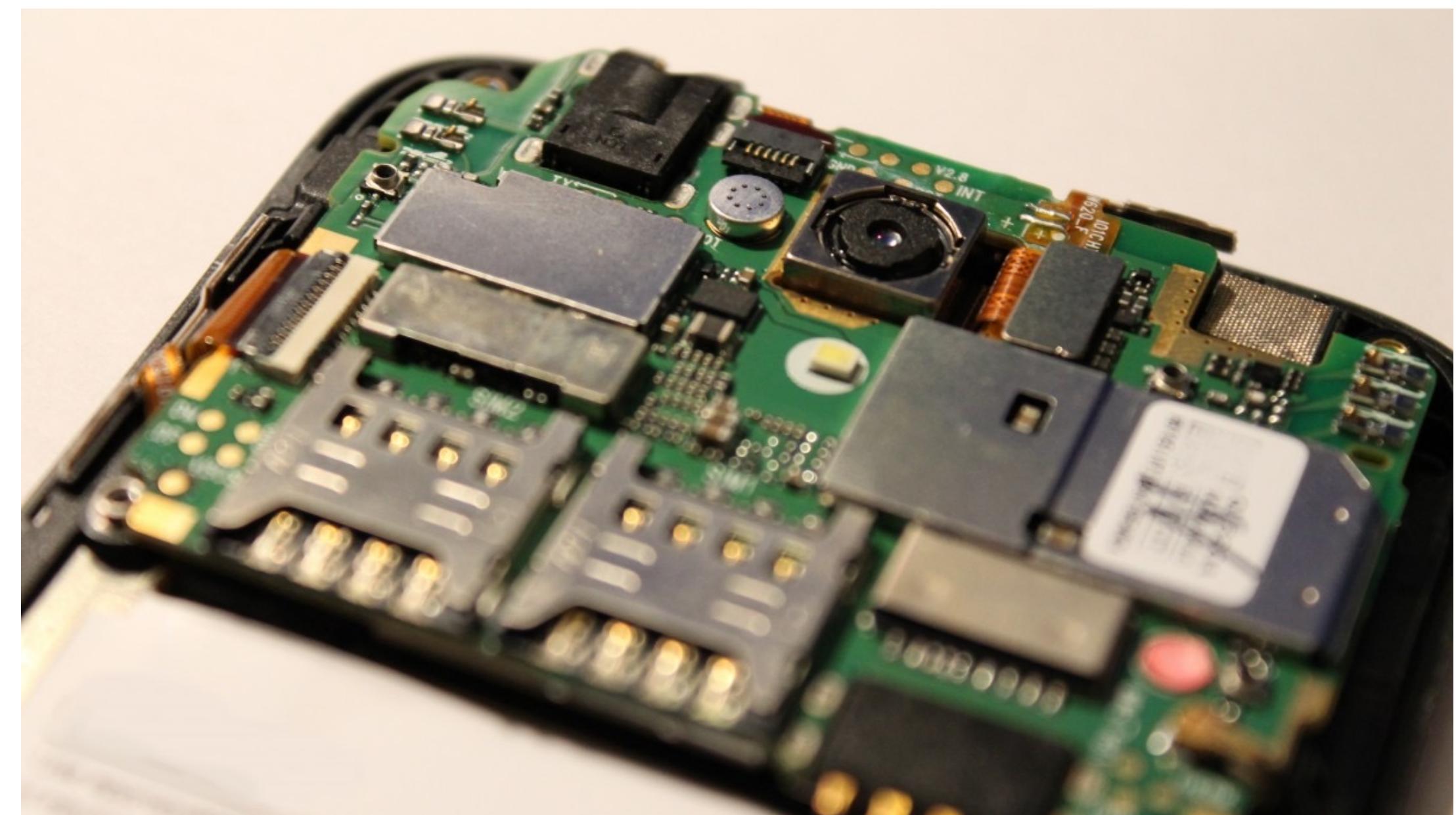
So why not just a web app?

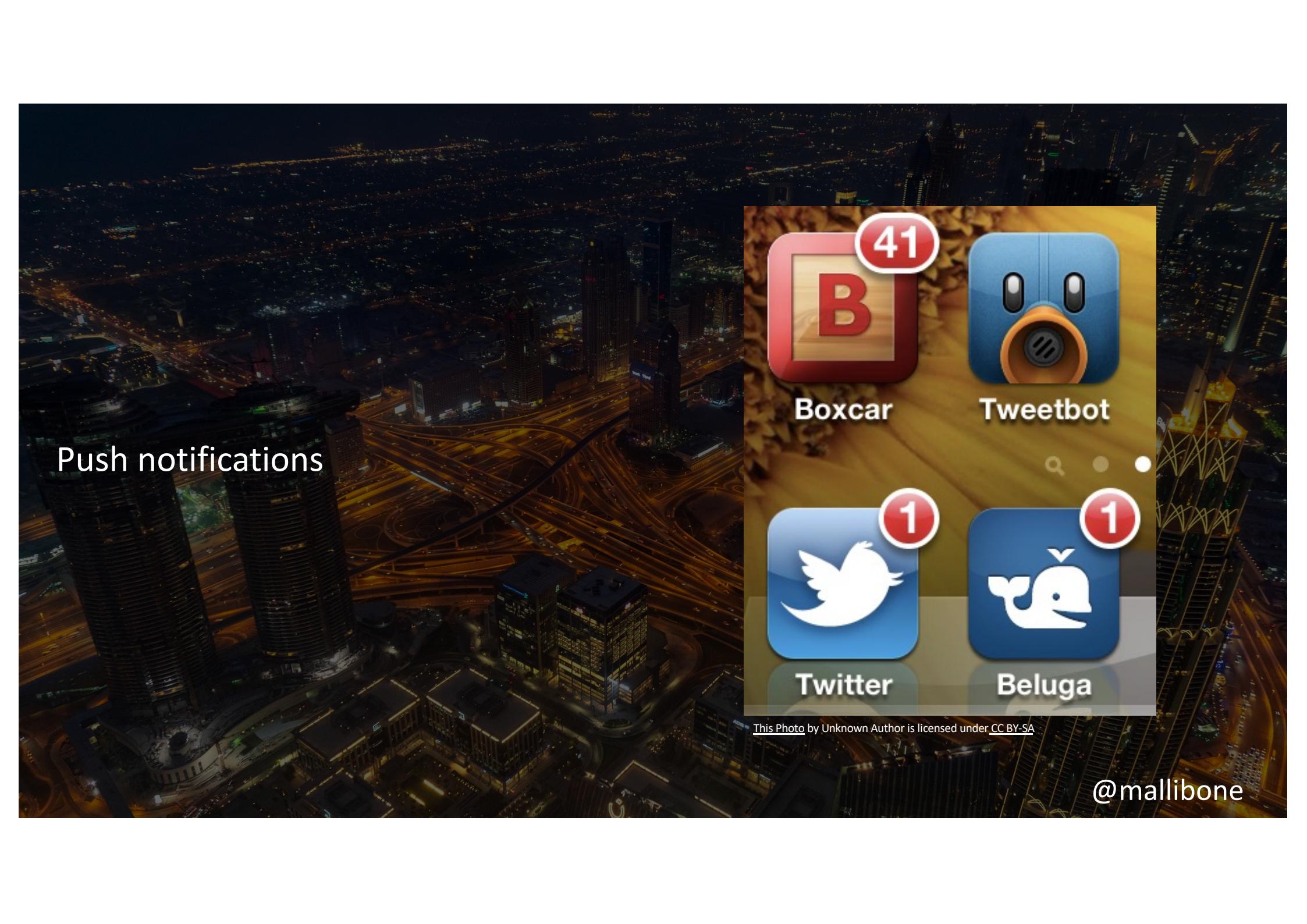


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[Photo by T Leish](#)



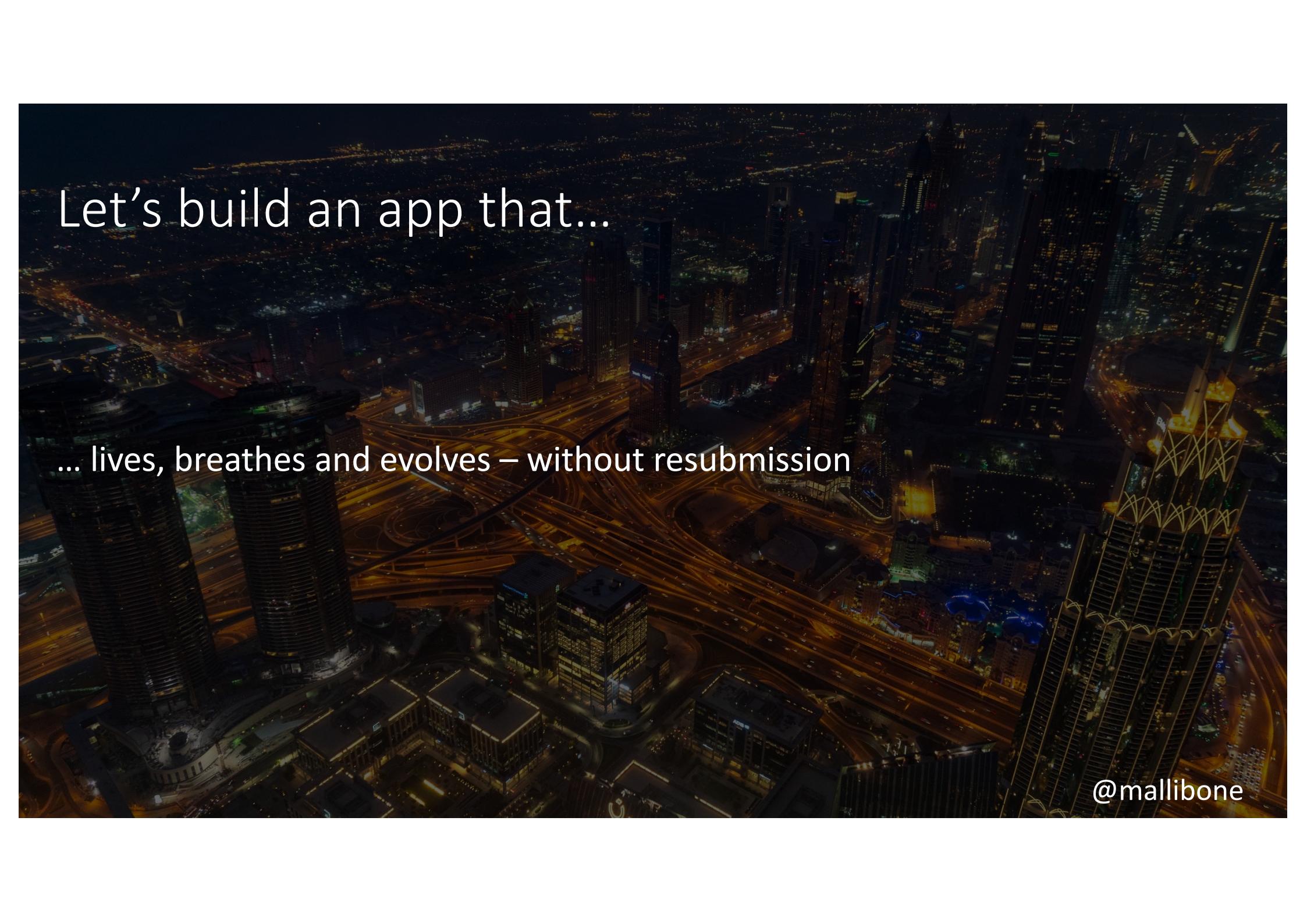


Push notifications



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

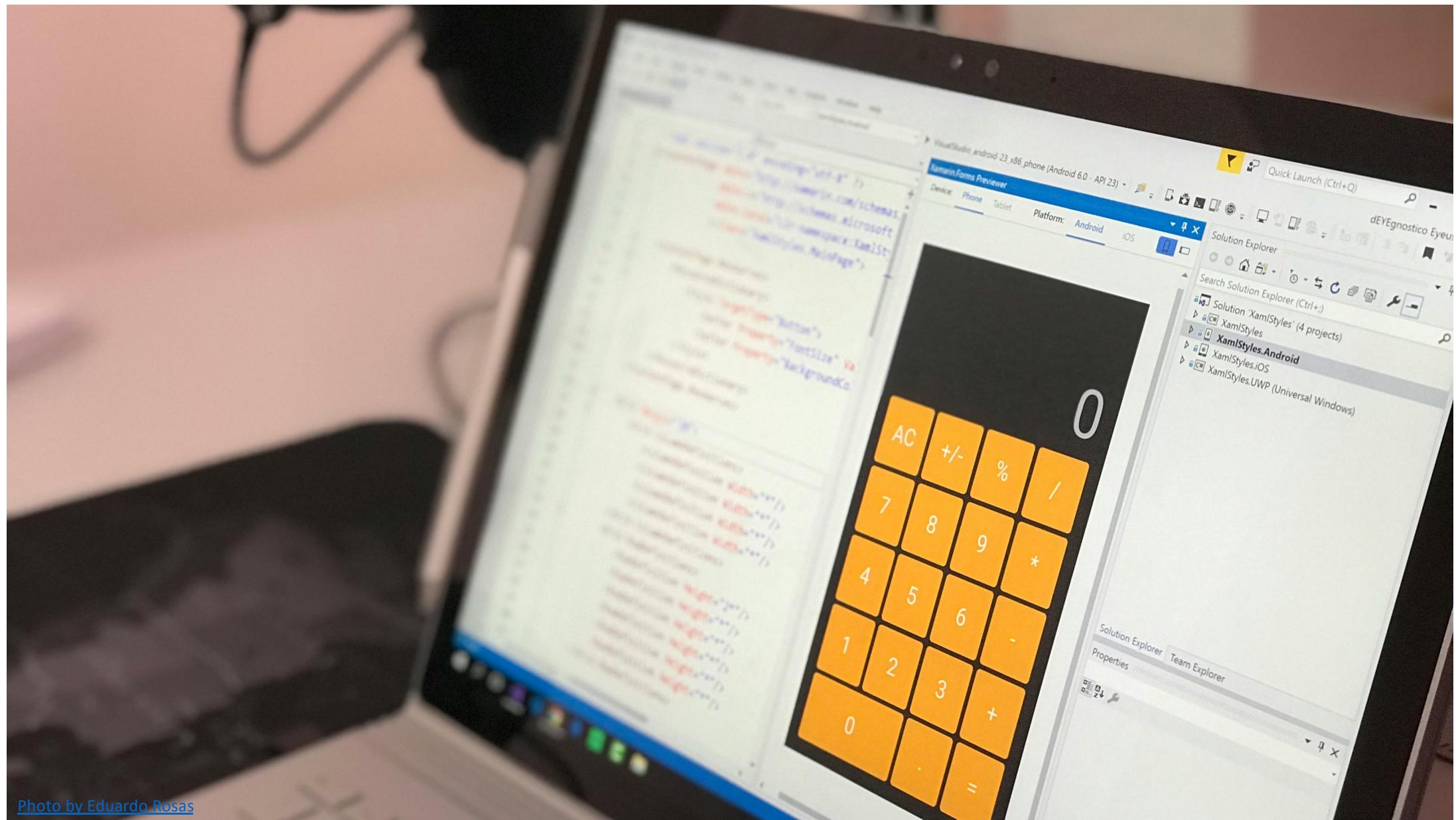
@mallibone

The background image is a wide-angle, aerial night photograph of a dense urban landscape. The city is filled with numerous skyscrapers of varying heights, their windows glowing with light. A complex network of elevated highways and overpasses cuts through the city, with lights from moving vehicles creating streaks of yellow and white. In the foreground, there are several prominent buildings, including a tall, curved tower on the left and a building with a distinctive sail-like roof on the right. The overall atmosphere is one of a modern, bustling metropolis.

Let's build an app that...

... lives, breathes and evolves – without resubmission

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[Photo by Eduardo Rosas](#)



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Ein Tag Abenteuer, in der Stadt, Bildung für 6+, 10+, 14+ im Freien.

Region wählen **Karte öffnen**

The map displays the Swiss Plateau with numerous red location markers numbered 1 through 16. Labeled locations include Saint-Hippolyte, Münster, Rokwiler, Zofingen, Langenthal, Biel/Bienne, Pieterlen, Biberist, Utzenstorf, Huttwil, Jegenstorf, Sursee, Hochdorf, Ruswil, Emmen, Zug, Arth, Einsiedeln, Niederurnen, Wattwil, Rüti, Horgen, Küsnacht, Wetzikon, Appenzell, Grabs, Bludenz, and Mels. Major roads like E27, A4, A8, and E60 are also indicated.

Activities Overview:

- Row 1:** Nationalpark GR (Bird in flight), Gelmerbahn – steilste Standseilbahn Europas (Person on a roller coaster), Hoher Kasten - Geologischer (Mountain landscape), Radtourismus im Broyegebiet (People cycling), Der Weg des kleinen Trappers (Hikers on a trail), Sagenerlebnisweg (People walking in a park), Planetenweg (People walking on a path).
- Row 2:** Abenteuer, Natur brücke – atakuläre (Lake and mountains), Der Forellenpfad in Morges (Person walking along a path), Ricola-Kräutergarten. Alles Natur. (Close-up of green plants), Windelwanderweg (Horses grazing), Weg der Wunder (Person standing near a waterfall), Ausflug auf den Weissenstein: (Person walking in a field), Nordwand-Lehrpfad: Wandern durch die (Snow-capped mountain peak).

Icons: The red banner features icons representing various activities: a church, a person fishing, a mountain, a sun, a person with a backpack, a person with a telescope, a birdhouse, and a road sign.



KILLER APP IDEA

A CONFERENCE APP

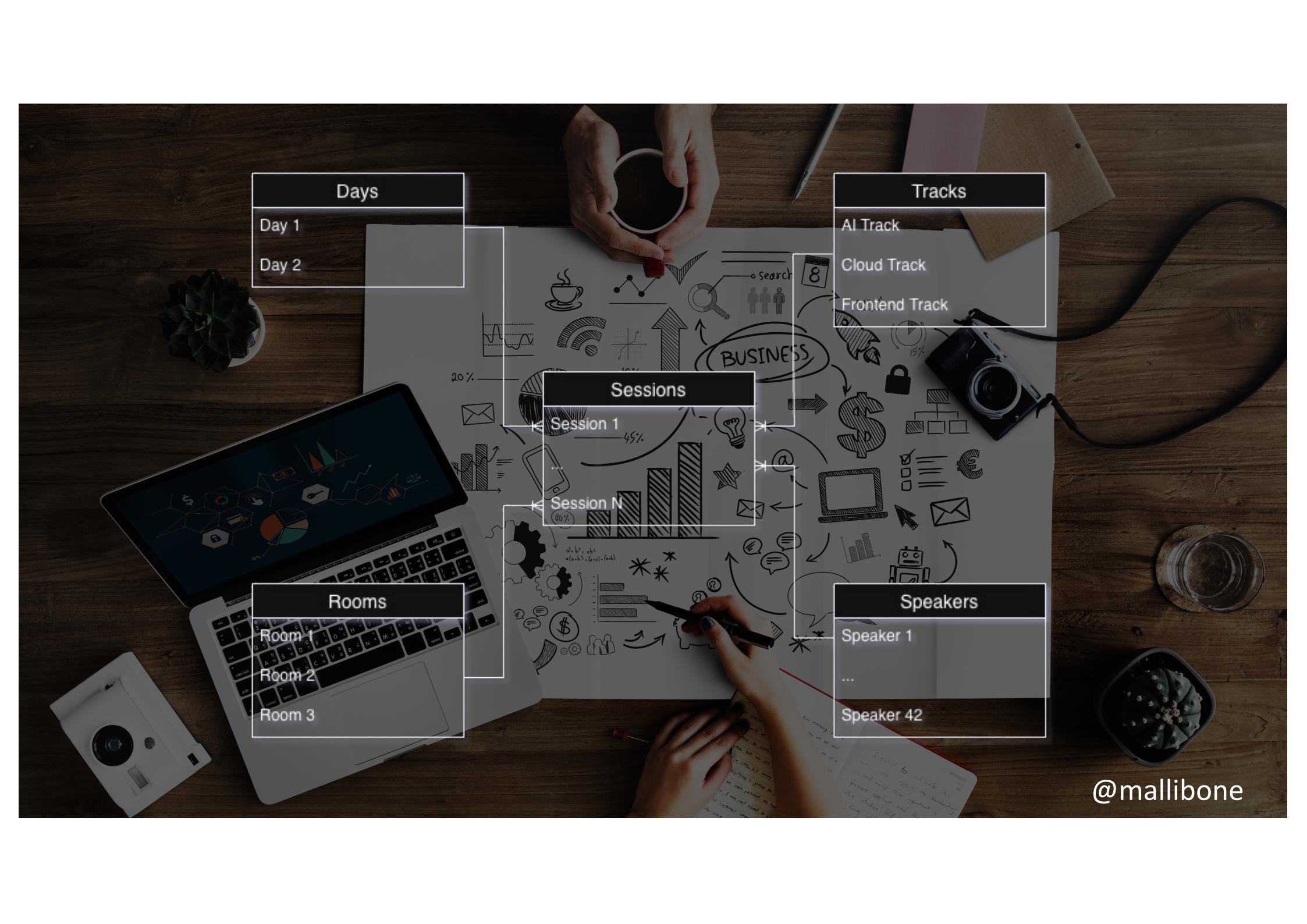


Render the app based on the data

@mallibone

KILAN RUFUS • CHLAPEČ MAJE DURH A INÉ





@mallibone

Conference App

Schedule

Day 1 - Friday
2025-11-15

Day 2 - Saturday
2025-11-16

Search sessions...

Track

09:00

Building Modern Mobile Apps with .NET MAUI
Sarah Johnson
Main Hall | 09:00 AM - 10:00 AM
Mobile Development

Azure Serverless Architecture Patterns
Michael Chen
Track Room 1 | 09:00 AM - 10:00 AM
Cloud & Azure

10:30

Blazor: Interactive Web Uis with C#
Emily Rodriguez
Track Room 2 | 10:30 AM - 11:30 AM
Web Development

Getting Started with ML.NET
David Kumar
Main Hall | 10:30 AM - 11:30 AM
AI & Machine Learning

12:00

MAUI Performance Deep Dive
Sarah Johnson
Track Room 1 | 12:00 PM - 01:00 PM
Mobile Development

Building Resilient Cloud Applications
Michael Chen
Track Room 2 | 12:00 PM - 01:00 PM
Cloud & Azure

14:00

Schedule Favorites

@mallibone

Conference App

Schedule

Day 1 - Friday
2025-11-15

Day 2 - Saturday
2025-11-16

Search sessions...

Track

09:00

Building Modern Mobile Apps with .NET MAUI

 Sarah Johnson
 Main Hall ⏰ 09:00 AM - 10:00 AM

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 David Kumar
 Main Hall ⏰ 10:30 AM - 11:30 AM

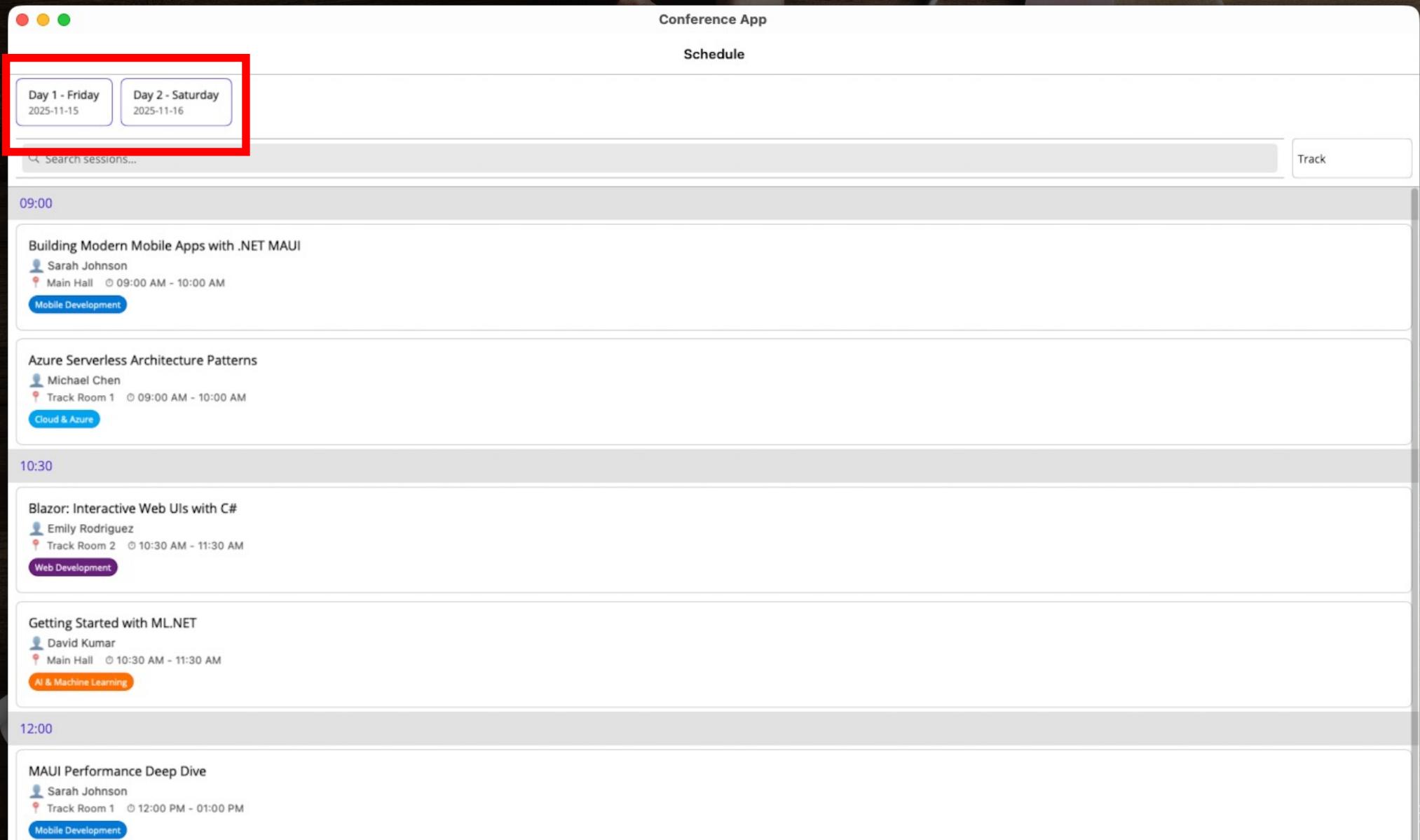
AI & Machine Learning

12:00

MAUI Performance Deep Dive

 Sarah Johnson
 Track Room 1 ⏰ 12:00 PM - 01:00 PM

Mobile Development

A screenshot of a "Conference App" interface titled "Schedule". At the top left, there are two buttons: "Day 1 - Friday 2025-11-15" and "Day 2 - Saturday 2025-11-16", with the latter being highlighted by a red rectangular box. Below these buttons is a search bar with the placeholder "Search sessions..." and a "Track" button. The main content area shows sessions listed by time: "09:00", "10:30", and "12:00". Each session card includes the title, speaker, location, time, and category tags.
Day 1 - Friday 2025-11-15

Day 2 - Saturday 2025-11-16

Conference App

Schedule

Search sessions... Track

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Building Modern Mobile Apps with .NET MAUI
Sarah Johnson
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Conference App

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Search sessions...

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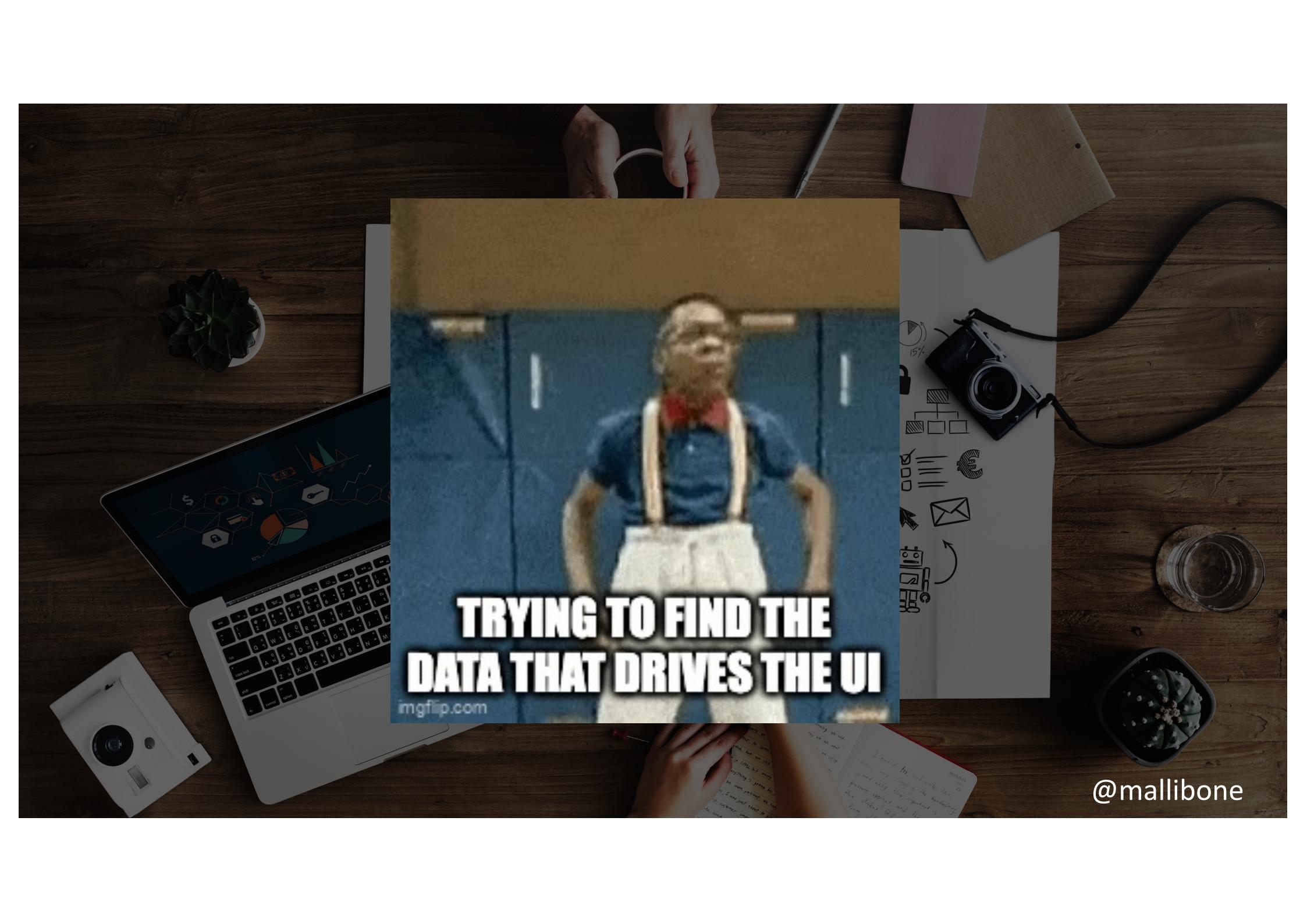
Getting Started with ML.NET

David Kumar
Main Hall | 10:30 AM - 11:30 AM
AI & Machine Learning

12:00

MAUI Performance Deep Dive

Sarah Johnson
Track Room 1 | 12:00 PM - 01:00 PM
Mobile Development



**TRYING TO FIND THE
DATA THAT DRIVES THE UI**

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...
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    "tier": "Platinum",
    "logoUrl": "https://via.placeholder.com/300x100",
    "website": "https://techorama.nl",
    "blurb": "The #1 Conference for IT & Microsoft professionals in the Netherlands"
},
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    "name": "iDIP Solution",
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    "fullName": "Sarah Johnson",
    "bio": "Sarah is a mobile development expert with 10+ years of experience building cross-platform applications. Microsoft MVP and MAUI enthusiast.",
    "company": "Mobile Innovators Inc.",
    "jobTitle": "Principal Mobile Architect",
    "socials": {
        "twitter": "@sarahjohnson",
        "github": "sarahjohnson",
        "linkedin": "sarahjohnson",
        "website": "https://sarahjohnson.dev"
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...
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```

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    }
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```

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    },
    ...
],
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    {
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        "name": "Speaker 1"
    }
]
```

```
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      "name": "Main Hall",
      "building": "Building A",
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      "capacity": 300,
      "mapCoordinates": {
        "lat": 47.3882,
        "lon": 8.5176
      }
    }
  ]
}
```

File Edit View Git Project Build Debug XML Test Analyze Tools Extensions Window Help Search **MauiApp1**

Debug Any CPU Android Emulator Live Share

Toolbox SQL Server Object Explorer

MauiApp1.csproj

```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <TargetFrameworks>net6.0-android;net6.0-ios;net6.0-maccatalyst</TargetFrameworks>
    <TargetFrameworks Condition="\"$([MSBuild]::IsOSPlatform('windows'))\">$([TargetFrameworks]);net6.0-windows10.0.19041.0</TargetFrameworks>
    <!-- Uncomment to also build the tizen app. You will need to install tizen by following this: https://github.com/Samsung/Tizen.NET -->
    <!-- <TargetFrameworks>$([TargetFrameworks]);net6.0-tizen</TargetFrameworks> -->
    <OutputType>Exe</OutputType>
    <RootNamespace>MauiApp1</RootNamespace>
    <UseMaui>true</UseMaui>
    <SingleProject>true</SingleProject>
    <ImplicitUsings>enable</ImplicitUsings>

    <!-- Display name -->
    <ApplicationTitle>MauiApp1</ApplicationTitle>

    <!-- App Identifier -->
    <ApplicationId>com.companyname.mauiapp1</ApplicationId>
    <ApplicationIdGuid>2128AE37-4BEC-46F8-B35E-B17F617BB30D</ApplicationIdGuid>

    <!-- Versions -->
    <ApplicationDisplayVersion>1.0</ApplicationDisplayVersion>
    <ApplicationVersion>1</ApplicationVersion>

    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'ios')\">14.2</SupportedOSPlatformVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'maccatalyst')\">14.0</SupportedOSPlatformVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'android')\">21.0</SupportedOSPlatformVersion>
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    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'tizen')\">6.5</SupportedOSPlatformVersion>
  </PropertyGroup>

  <ItemGroup>
    <!-- App Icon -->
    <MauiIcon Include="Resources\Icon\appicon.svg" ForegroundFile="Resources\Icon\appiconfg.svg" Color="#512BD4" />

    <!-- Splash Screen -->
    <MauiSplashScreen Include="Resources\Splash\splash.svg" Color="#512BD4" BaseSize="128,128" />

    <!-- Images -->
    <MauiImage Include="Resources\Images\*" />
    <MauiImage Update="Resources\Images\dotnet_bot.svg" BaseSize="168,208" />

    <!-- Custom Fonts -->
    <MauiFont Include="Resources\Fonts\*" />

    <!-- Raw Assets (also remove the "Resources\Raw" prefix) -->
    <MauiAsset Include="Resources\Raw\**" LogicalName="%(RecursiveDir)%(Filename)%(Extension)" />
  </ItemGroup>

```

100 % No issues found Ln: 1 Ch: 1 TABS CRLF

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+U)

Solution 'MauiApp1' (1 of 1 project)

MauiApp1

- Dependencies
- Properties
- Platforms
 - Android
 - iOS
 - MacCatalyst
 - Tizen
 - Windows
- Resources
- App.xaml
- AppShell.xaml
- MainPage.xaml
- MauiProgram.cs

Solution Explorer Git Changes

Properties

XML Document

Misc

Encoding Unicode (UTF-8)

Output

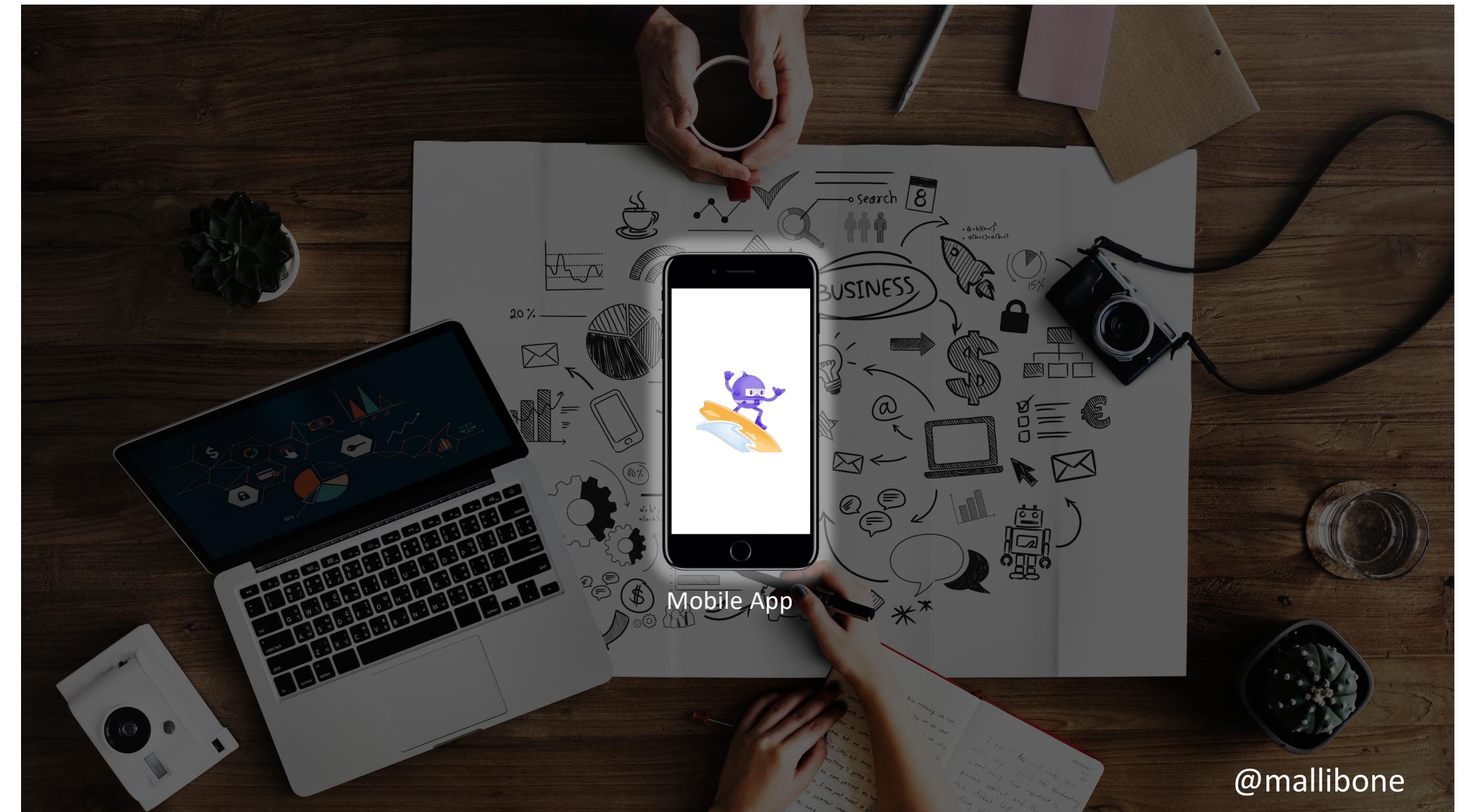
Schemas "C:\Program Files\Microsoft Visual Studio\2022\Community\SDK\NuGetFallbackFolder\Microsoft.Maui\6.0.0\ref\net6.0\Microsoft.Maui.dll"

Stylesheet

Encoding

Character encoding of the document.

Add to Source Control Select Repository



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Mobile App

Static File Storage

@mallibone



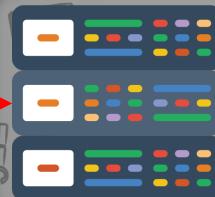
Mobile App



JSON
{ }

Request

Static File Storage



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OFFLINE



@mallibone

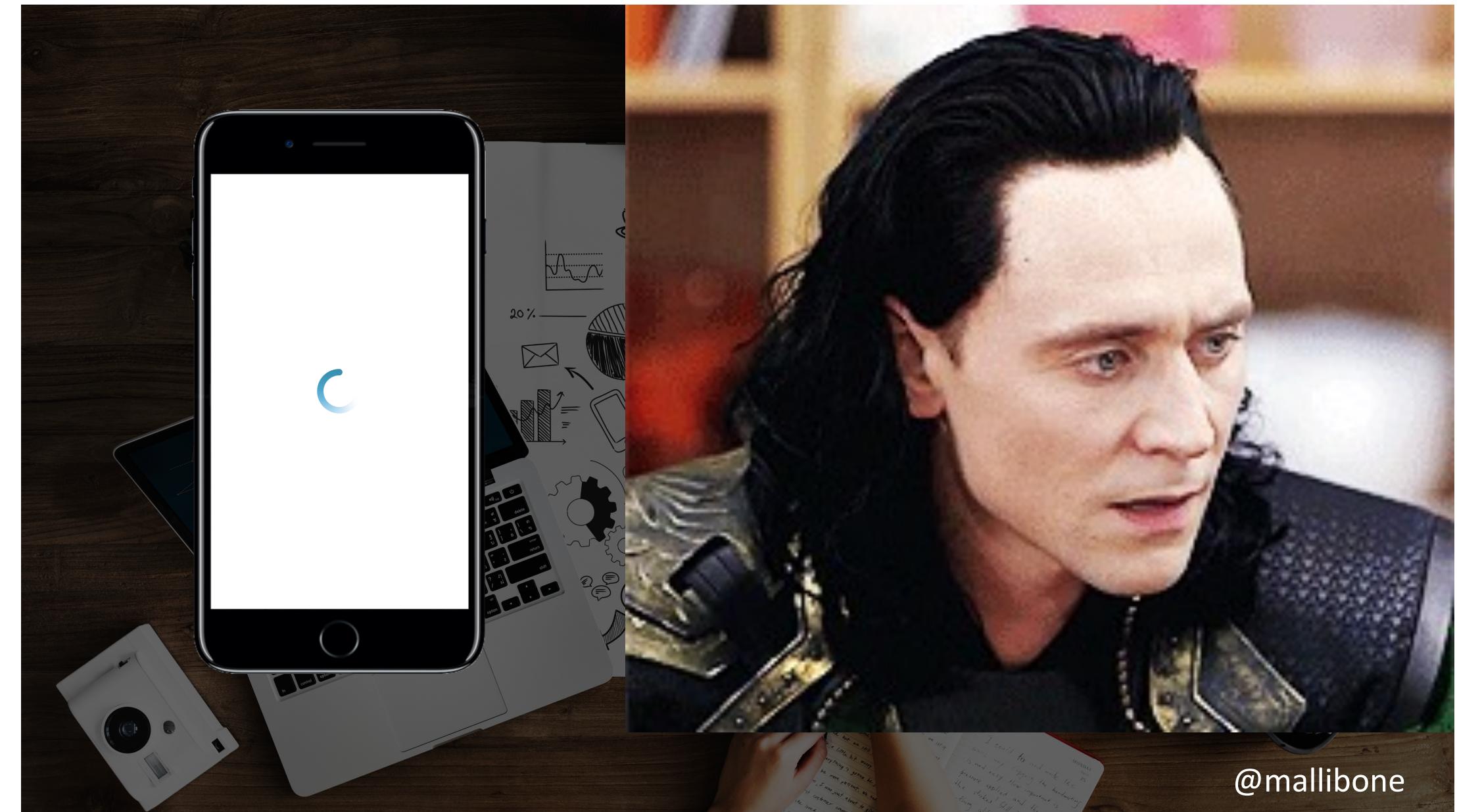
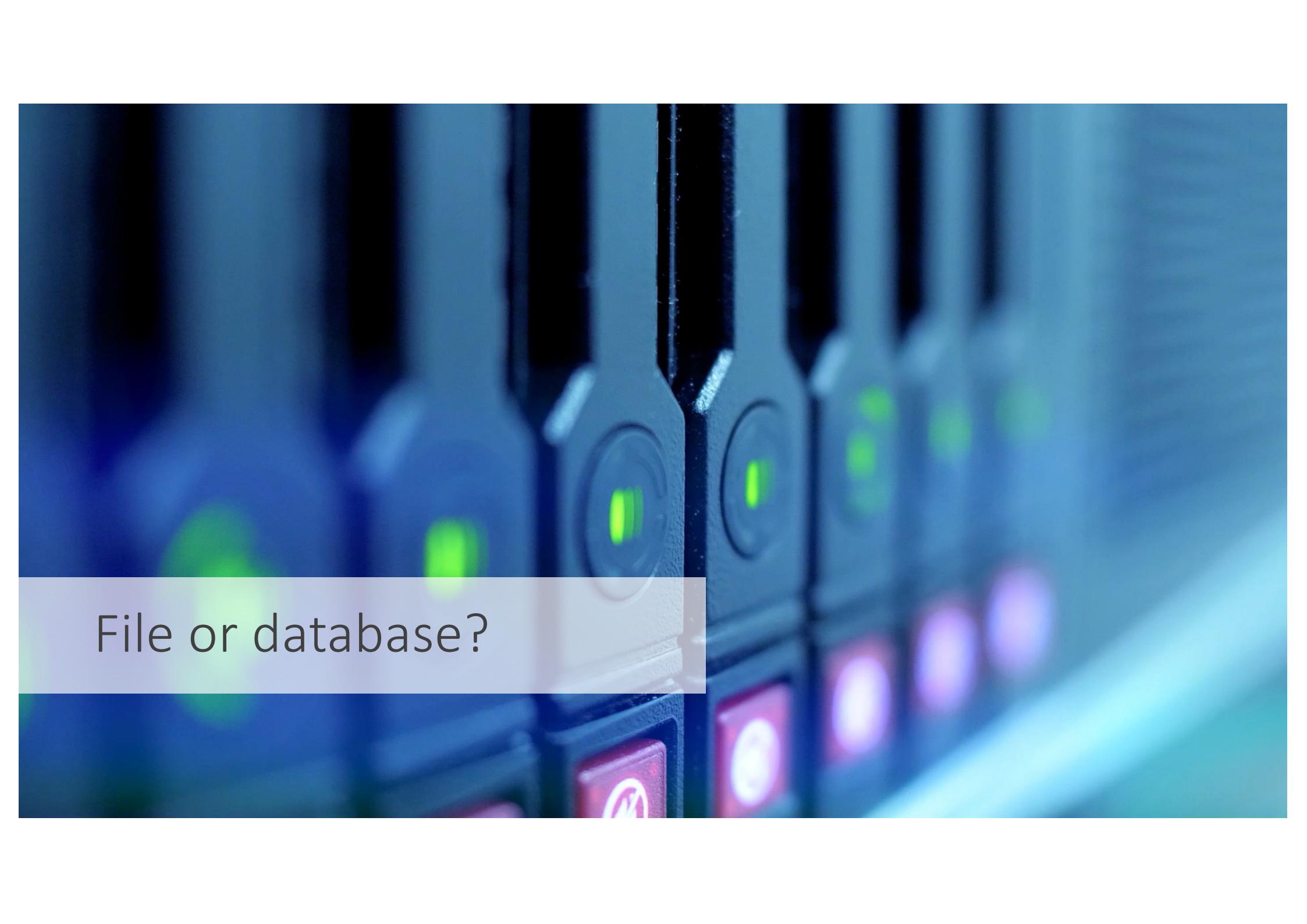




Photo by Andrey Matveev: <https://www.pexels.com/photo/remote-control-with-batteries-on-yellow-background-28801919/>

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```

```
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        "tz": "Europe/Zurich",  
        "venue": "Technopark Zurich",  
        "address": "Technoparkstrasse 1, 8005 Zürich, Switzerland",  
        "startDate": "2025-11-15",  
        "endDate": "2025-11-16"  
    },  
    "api": {  
        "baseUrl": "https://conference-api.example.com",  
        "assetsBaseUrl": "https://cdn.example.com/assets"  
    },  
    "days": [  
        {  
            "index": 0,  
            "date": "2025-11-15",  
            "tz": "Europe/Zurich",  
            "friendlyName": "Day 1 - Friday"  
        },  
        {  
            "index": 1,  
            "date": "2025-11-16",  
            "tz": "Europe/Zurich",  
            "friendlyName": "Day 2 - Saturday"  
        }  
    ],  
    "tracks": [  
        {  
            "id": "track-mobile",  
            "name": "Mobile Development",  
            "colorHex": "#0078D4",  
            "order": 1  
        },  
        {  
            "id": "track-ux",  
            "name": "User Experience",  
            "colorHex": "#E6A239",  
            "order": 2  
        },  
        {  
            "id": "track-data",  
            "name": "Data Science",  
            "colorHex": "#F08080",  
            "order": 3  
        },  
        {  
            "id": "track-cloud",  
            "name": "Cloud Computing",  
            "colorHex": "#80BFFF",  
            "order": 4  
        }  
    ]  
}
```



File or database?

118N



I8N

Localization of Mobile Apps



English



Español



Deutsch



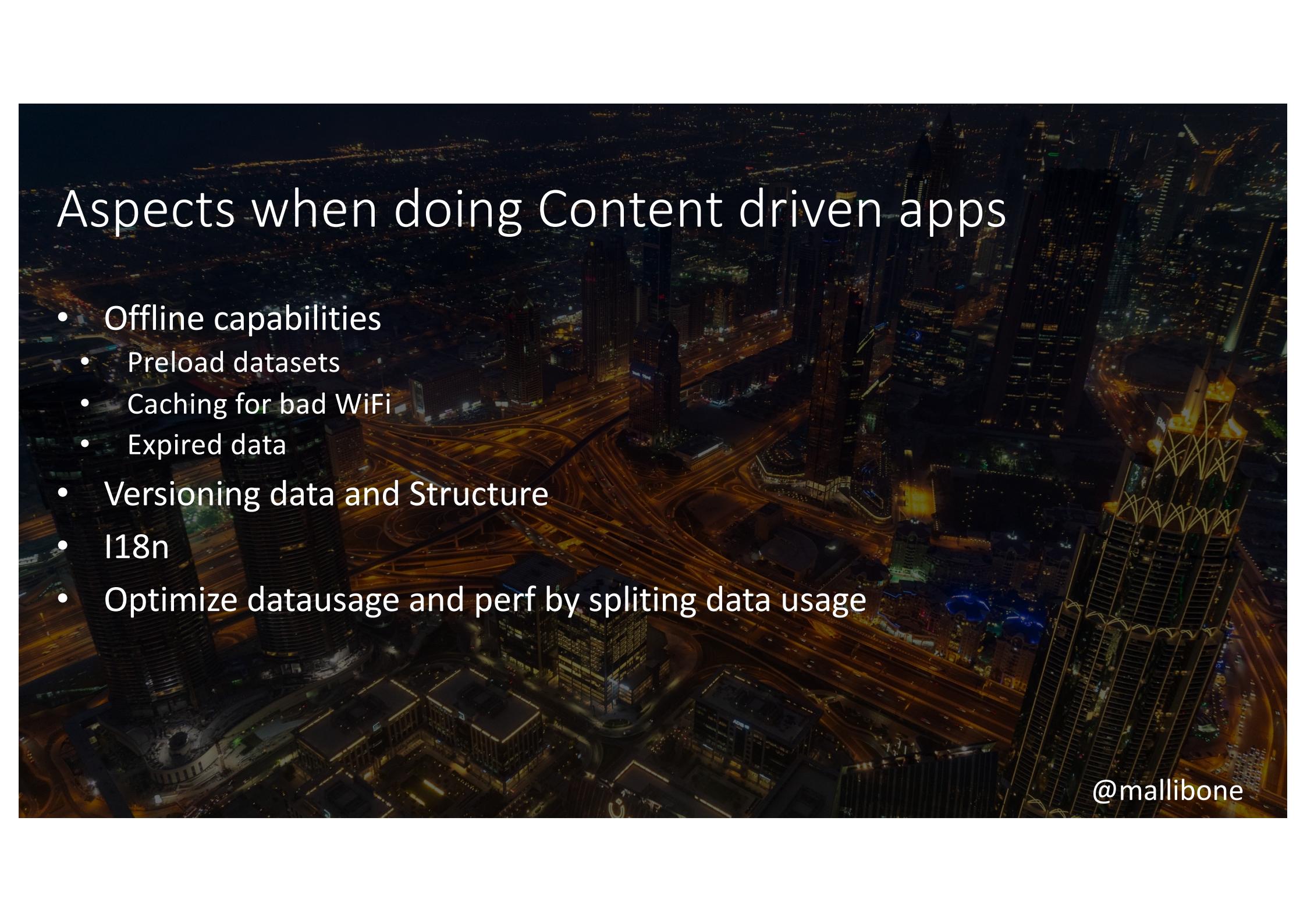
Français



Italiano



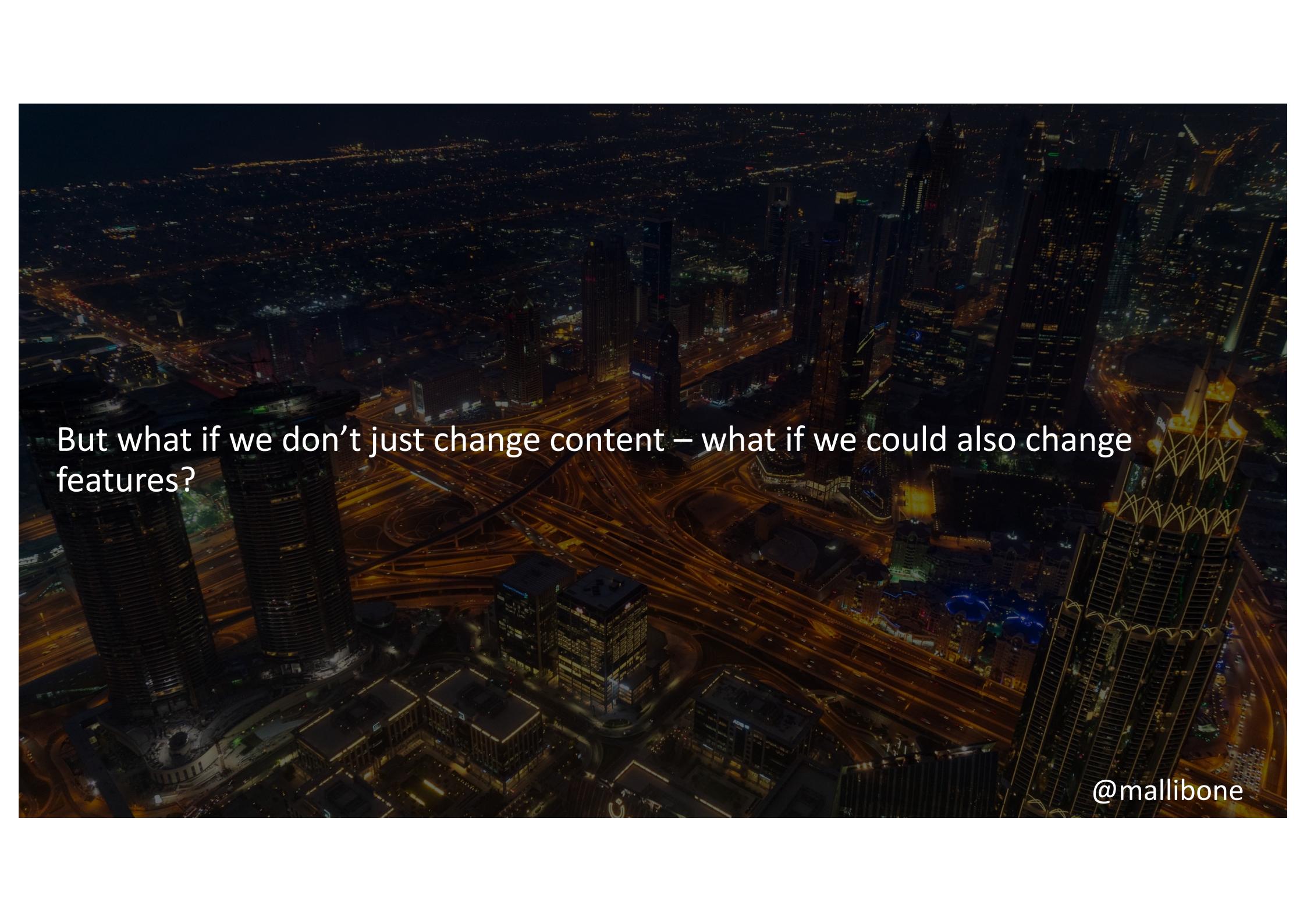
日本語

The background of the slide is a nighttime aerial photograph of a dense urban area, likely Dubai, featuring a complex network of elevated highways and numerous skyscrapers with their lights reflected in the surrounding environment.

Aspects when doing Content driven apps

- Offline capabilities
 - Preload datasets
 - Caching for bad WiFi
 - Expired data
- Versioning data and Structure
- I18n
- Optimize datausage and perf by splitting data usage

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The background image is a wide-angle, aerial night photograph of a modern city skyline. The scene is filled with numerous skyscrapers of varying heights, their windows glowing with lights. A complex network of elevated highways and overpasses cuts through the city, with streaks of light from moving vehicles visible against the dark sky. In the foreground, there are lower buildings and more of the city's infrastructure. The overall atmosphere is one of a bustling, futuristic urban environment.

But what if we don't just change content – what if we could also change features?

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PUSHING CODE AT RUNTIME?

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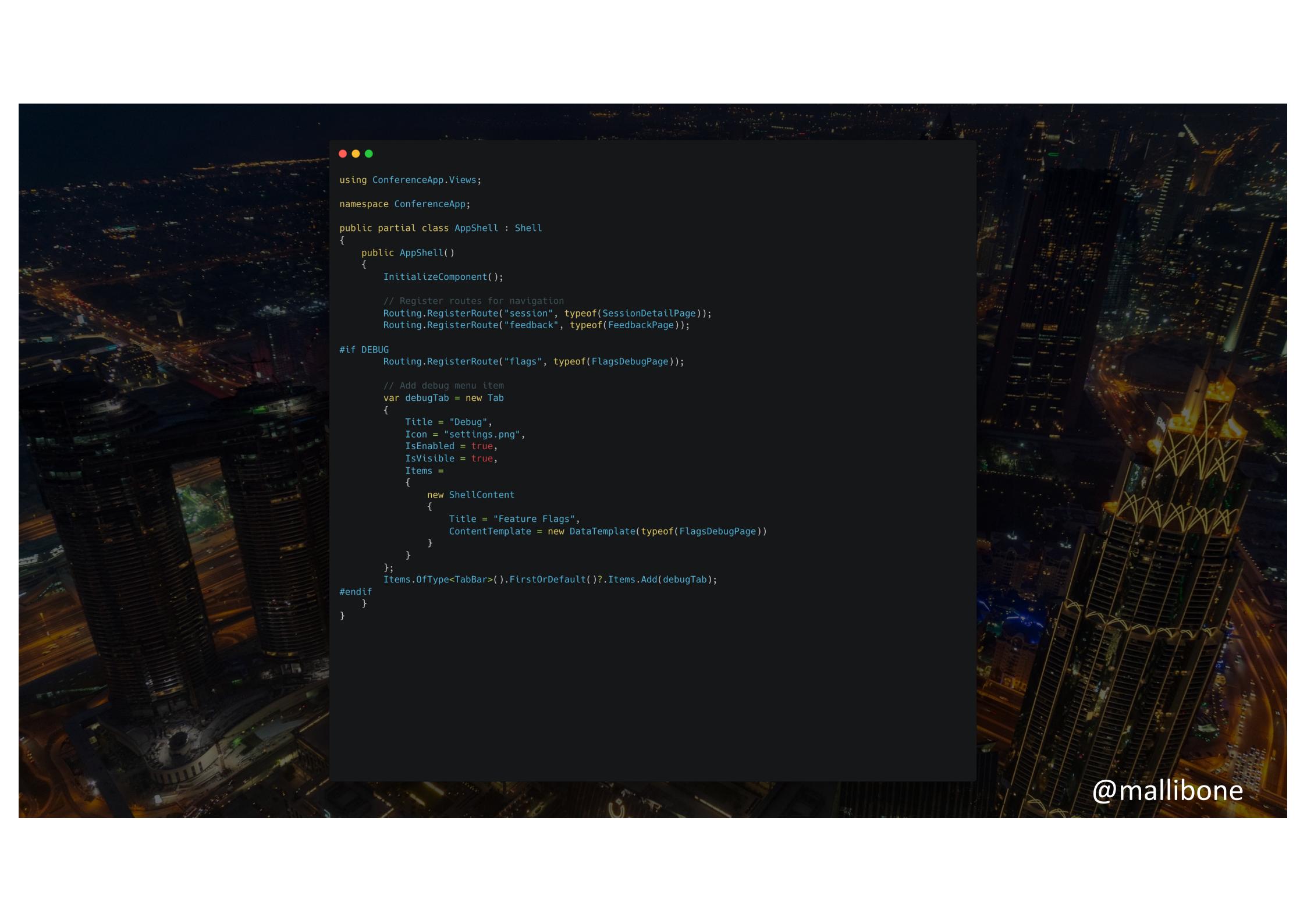


```
{  
  "version": "1",  
  "sessionFeedbackEnabled": true,  
  "lunchMenuEnabled": true,  
  "speakerHrmEnabled": false,  
  "floorPlanEnabled": false  
}
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<Shell
    x:Class="ConferenceApp.AppShell"
    xmlns="http://schemas.microsoft.com/dotnet/2021/maui"
    xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"
    xmlns:local="clr-namespace:ConferenceApp"
    xmlns:views="clr-namespace:ConferenceApp.Views"
    Title="Conference App">

    <TabBar>
        <ShellContent
            Title="Schedule"
            Icon="calendar.png"
            ContentTemplate="{DataTemplate views:SchedulePage}"
            Route="schedule"
            IsVisible="{Binding IsScheduleVisible}" />
        <ShellContent
            Title="Favorites"
            Icon="star.png"
            ContentTemplate="{DataTemplate views:FavoritesPage}"
            Route="favorites"
            IsVisible="{Binding IsFavoritesVisible}" />
    </TabBar>
</Shell>
```

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```
using ConferenceApp.Views;

namespace ConferenceApp;

public partial class AppShell : Shell
{
    public AppShell()
    {
        InitializeComponent();

        // Register routes for navigation
        Routing.RegisterRoute("session", typeof(SessionDetailPage));
        Routing.RegisterRoute("feedback", typeof(FeedbackPage));

#if DEBUG
        Routing.RegisterRoute("flags", typeof(FlagsDebugPage));

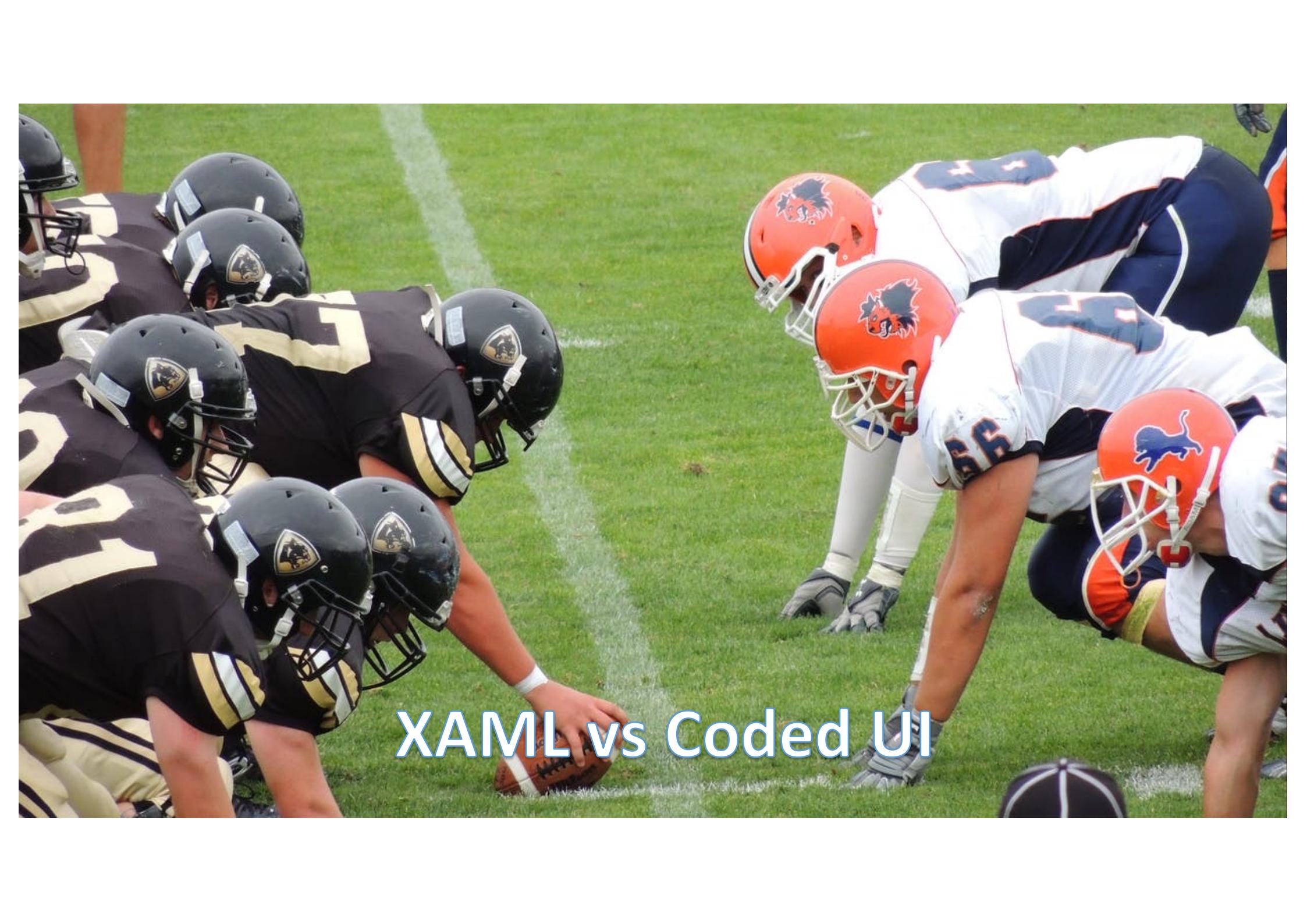
        // Add debug menu item
        var debugTab = new Tab
        {
            Title = "Debug",
            Icon = "settings.png",
            IsEnabled = true,
            IsVisible = true,
            Items =
            {
                new ShellContent
                {
                    Title = "Feature Flags",
                    ContentTemplate = new DataTemplate(typeof(FlagsDebugPage))
                }
            }
        };
        Items.OfType<TabBar>().FirstOrDefault()?.Items.Add(debugTab);
#endif
    }
}
```

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```
Routing.RegisterRoute("session", typeof(SessionDetailPage));
Routing.RegisterRoute("feedback", typeof(FeedbackPage));

#if DEBUG
    Routing.RegisterRoute("flags", typeof(FlagsDebugPage));

    // Add debug menu item
    var debugTab = new Tab
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            {
                Title = "Feature Flags",
                ContentTemplate = new DataTemplate(typeof(FlagsDebugPage))
            }
        }
    };
    Items.OfType<TabBar>().FirstOrDefault()?.Items.Add(debugTab);
#endif
}
```



XAML vs Coded UI



An aerial photograph of a construction or demolition site. In the center, a yellow excavator is positioned on a dark, debris-strewn ground. To its right, there's a large, partially demolished building with a blue corrugated metal roof. The building has several open rooms and a staircase. A blue tarp is draped over one of the rooms. The surrounding area is filled with various construction materials, including wooden planks, metal rods, and other debris. The overall scene is industrial and shows active work.

How it works



A large, semi-transparent aerial photograph of a city at night serves as the background for the diagram. The city is densely packed with skyscrapers, some with illuminated windows, and a complex network of elevated highways and roads below.

Init

Local seed update via
Cloud

Flag
Service

Single
point of
truth

UI

Render
accordingly

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File Edit View Git Project Build Debug XML Test Analyze Tools Extensions Window Help Search **MauiApp1**

Debug Any CPU Android Emulator Live Share

Toolbox SQL Server Object Explorer

MauiApp1.csproj

```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <TargetFrameworks>net6.0-android;net6.0-ios;net6.0-maccatalyst</TargetFrameworks>
    <TargetFrameworks Condition="\"$([MSBuild]::IsOSPlatform('windows'))\">$([TargetFrameworks]);net6.0-windows10.0.19041.0</TargetFrameworks>
    <!-- Uncomment to also build the tizen app. You will need to install tizen by following this: https://github.com/Samsung/Tizen.NET -->
    <!-- <TargetFrameworks>$([TargetFrameworks]);net6.0-tizen</TargetFrameworks> -->
    <OutputType>Exe</OutputType>
    <RootNamespace>MauiApp1</RootNamespace>
    <UseMaui>true</UseMaui>
    <SingleProject>true</SingleProject>
    <ImplicitUsings>enable</ImplicitUsings>

    <!-- Display name -->
    <ApplicationTitle>MauiApp1</ApplicationTitle>

    <!-- App Identifier -->
    <ApplicationId>com.companyname.mauiapp1</ApplicationId>
    <ApplicationIdGuid>2128AE37-4BEC-46F8-B35E-B17F617BB30D</ApplicationIdGuid>

    <!-- Versions -->
    <ApplicationDisplayVersion>1.0</ApplicationDisplayVersion>
    <ApplicationVersion>1</ApplicationVersion>

    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'ios')\">14.2</SupportedOSPlatformVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'maccatalyst')\">14.0</SupportedOSPlatformVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'android')\">21.0</SupportedOSPlatformVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'windows')\">10.0.17763.0</SupportedOSPlatformVersion>
    <TargetPlatformMinVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'windows')\">10.0.17763.0</TargetPlatformMinVersion>
    <SupportedOSPlatformVersion Condition="\"$([MSBuild]::GetTargetPlatformIdentifier('$(TargetFramework)')\" == 'tizen')\">6.5</SupportedOSPlatformVersion>
  </PropertyGroup>

  <ItemGroup>
    <!-- App Icon -->
    <MauiIcon Include="Resources\Icon\appicon.svg" ForegroundFile="Resources\Icon\appiconfg.svg" Color="#512BD4" />

    <!-- Splash Screen -->
    <MauiSplashScreen Include="Resources\Splash\splash.svg" Color="#512BD4" BaseSize="128,128" />

    <!-- Images -->
    <MauiImage Include="Resources\Images\*" />
    <MauiImage Update="Resources\Images\dotnet_bot.svg" BaseSize="168,208" />

    <!-- Custom Fonts -->
    <MauiFont Include="Resources\Fonts\*" />

    <!-- Raw Assets (also remove the "Resources\Raw" prefix) -->
    <MauiAsset Include="Resources\Raw\**" LogicalName="%(RecursiveDir)%(Filename)%(Extension)" />
  </ItemGroup>

```

100 % No issues found Ln: 1 Ch: 1 TABS CRLF

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+U)

Solution 'MauiApp1' (1 of 1 project)

MauiApp1

- Dependencies
- Properties
- Platforms
 - Android
 - iOS
 - MacCatalyst
 - Tizen
 - Windows
- Resources
- App.xaml
- AppShell.xaml
- MainPage.xaml
- MauiProgram.cs

Solution Explorer Git Changes

Properties

XML Document

Misc

Encoding Unicode (UTF-8)

Output

Schemas "C:\Program Files\Microsoft Visual Studio\2022\Community\SDK\NuGetFallbackFolder\Microsoft.Maui\6.0.0\ref\net6.0\Microsoft.Maui.dll"

Stylesheet

Encoding

Character encoding of the document.

Add to Source Control Select Repository

Post demo side notes

- Still works offline
- Keep Dev simple
- Combine with A/B testing or experimentation
- Avoid going overboard – think generic templates not generic app

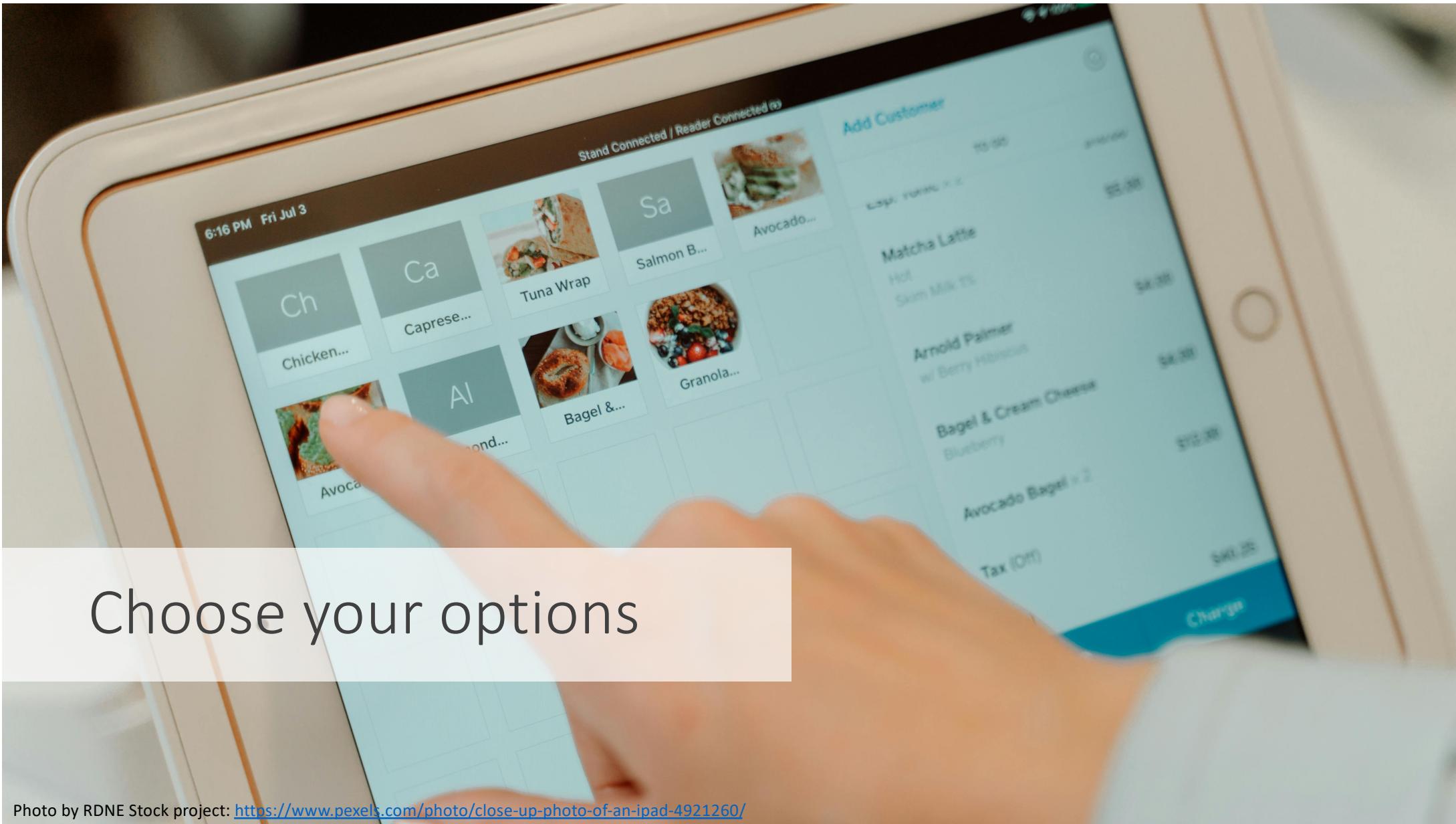
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SHOW ME THE MONEY!

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Choose your options





White labelling



TELL ME MORE ABOUT THOSE

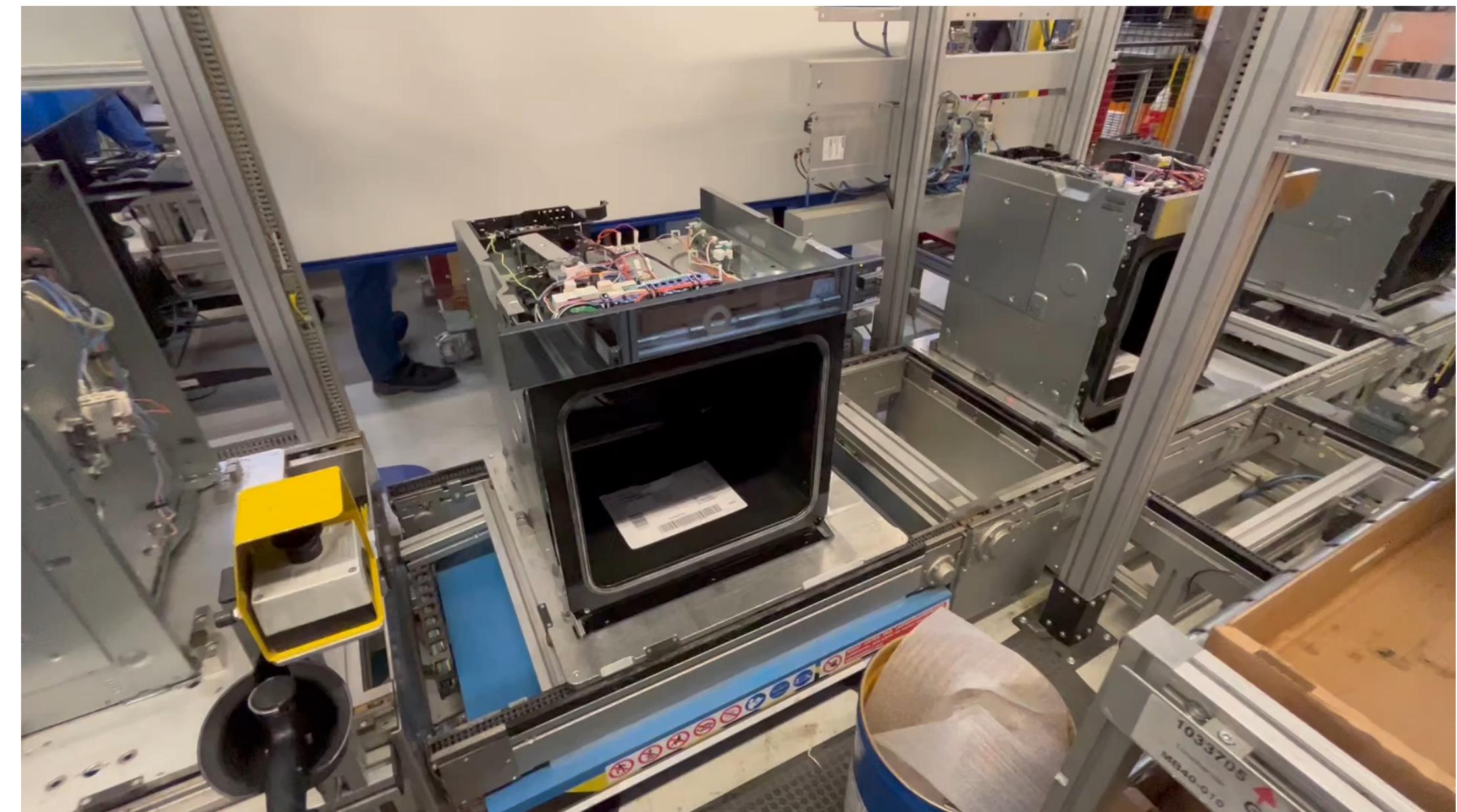
GENERIC TEMPLATES

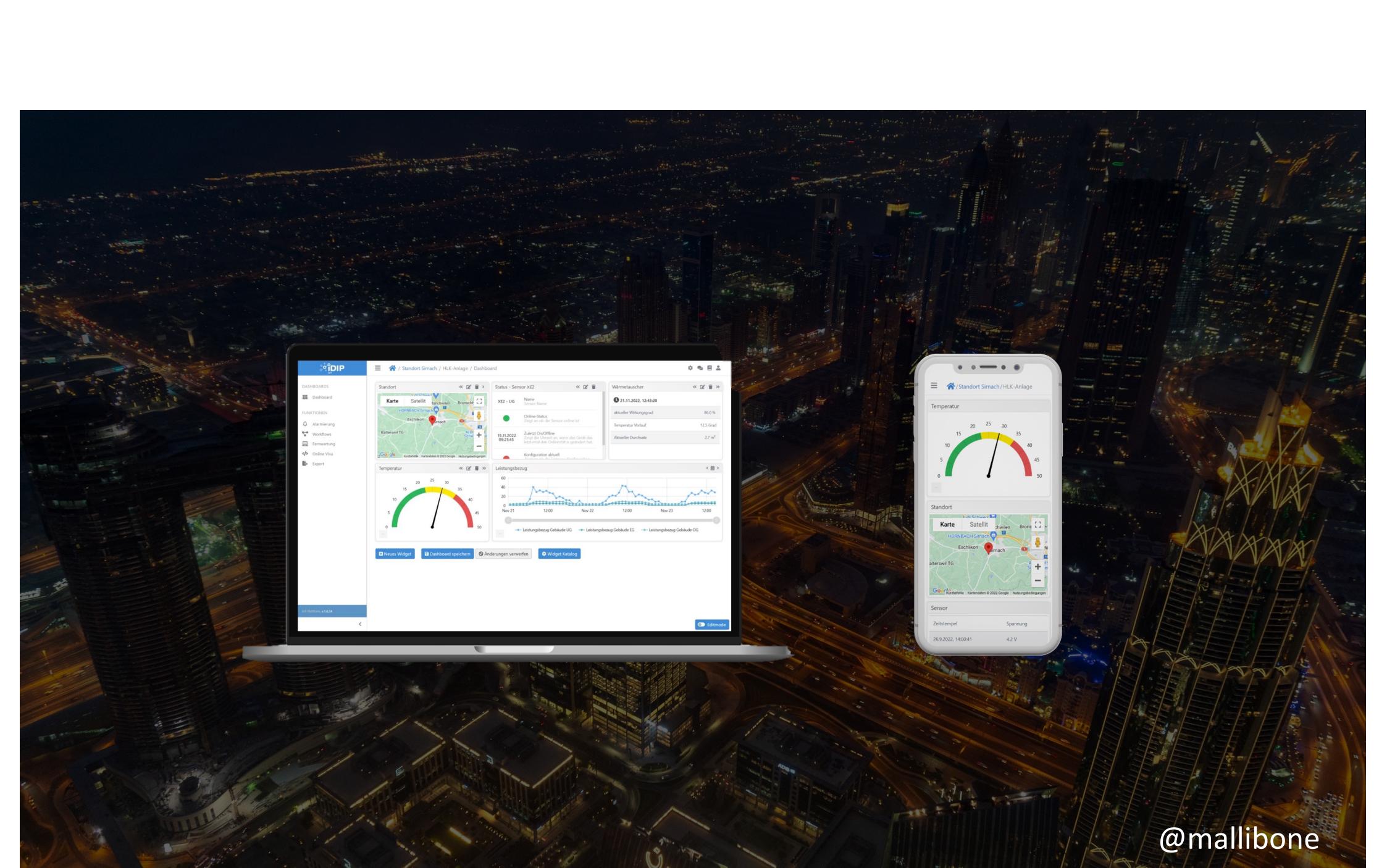
imgflip.com

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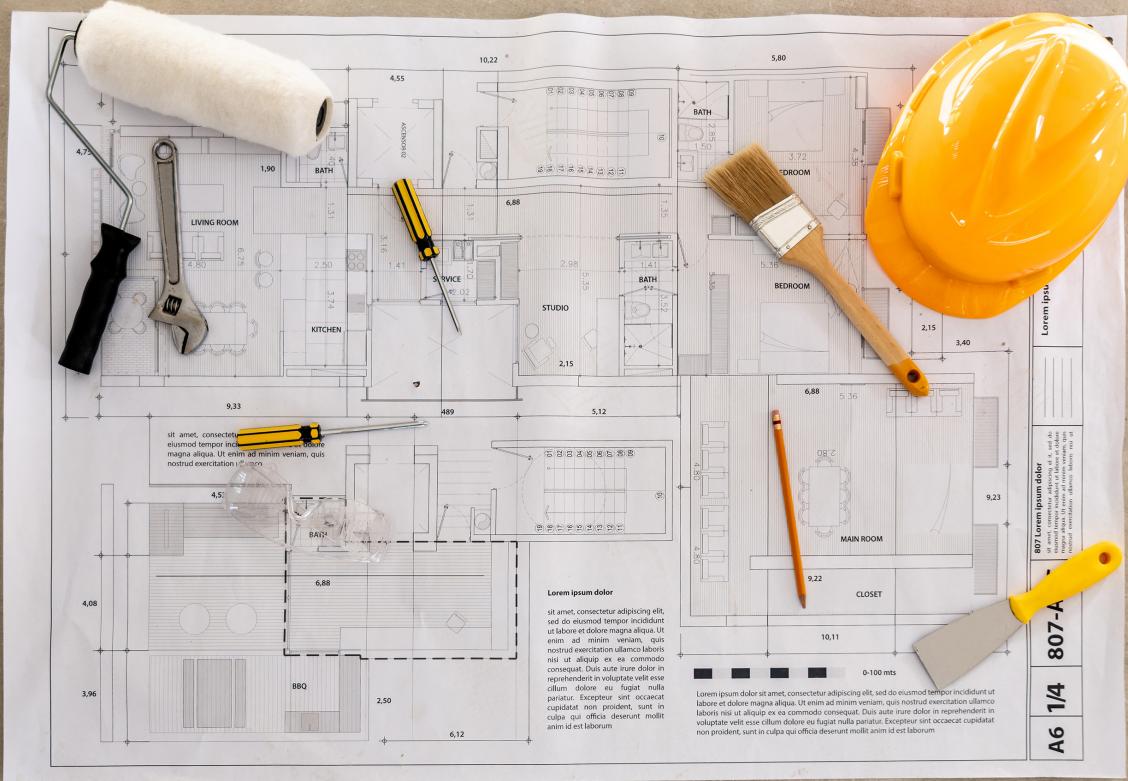


Enabling Domain Experts





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CODE RANT

LIFE AS I SEE IT

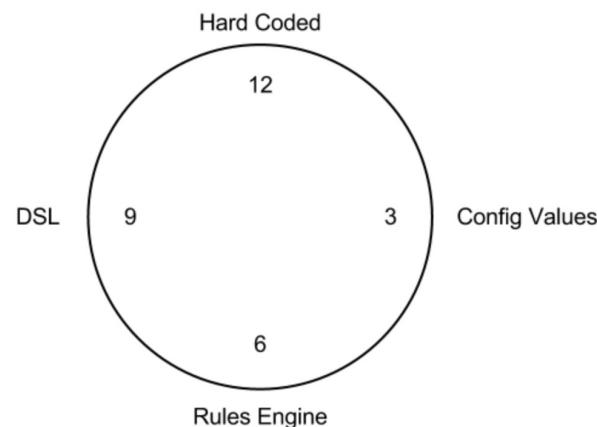
<https://mikehadlow.blogspot.com/2012/05/configuration-complexity-clock.html>

MONDAY, MAY 07, 2012

The Configuration Complexity Clock

When I was a young coder, just starting out in the big scary world of enterprise software, an older, far more experienced chap gave me a stern warning about hard coding values in my software. "They *will* have to change at some point, and you don't want to recompile and redeploy your application just to change the VAT tax rate." I took this advice to heart and soon every value that my application needed was loaded from a huge .ini file. I still think it's good advice, but be warned, like most things in software, it's good advice *up to a point*. Beyond that point lies pain.

Let me introduce you to my 'Configuration Complexity Clock'.



This clock tells a story. We start at midnight, 12 o'clock, with a simple new requirement which we quickly code up as a little application. It's not expected to last very long, just a stop-gap in some larger strategic scheme, so we've hard-coded all the application's values. Months pass, the application becomes widely used, but there's a problem, some of the business values change, so we find ourselves rebuilding and re-deploying it just to change a few numbers. This is obviously wrong. The solution is simple, we'll move those values out into a configuration file, maybe some appsettings in our App.config. Now we're at 2 on the clock.

Time passes and our application is now somewhat entrenched in our organisation. The business continues to evolve and as it does, more values are moved to our configuration file. Now appsettings are no longer sufficient, we have groups of values and hierarchies of values. If we're good, by now we will have moved our configuration into a dedicated XML schema that gets de-serialized into a configuration model. If we're not so good we might have shoe-horned repeated and multi-dimensional values into some strange tilda and pipe separated strings. Now we're at 4 or 5 on the clock.

More time passes, the irritating 'chief software architect' has been sacked and our little application is now core to our organisation. The business rules become more complex and so does our configuration. In fact there's now a considerable learning curve before a new hire can successfully carry out a deployment. One of our new hires is a very clever chap, he's seen this situation before. "What we need is a business rules engine" he declares. Now this looks promising. The configuration moves from its XML file into a database and has its own specialised GUI. Initially there was hope that non-technical business users would be able to use the GUI to configure the application, but that turned out to be a false hope; the mapping of business rules into the engine requires a level of expertise that only some members of the development team possess. We're now at 6 on the clock.

CODE RANT

Hire Me!

Notepad, thoughts out loud, learning in public, misunderstandings, mistakes, undiluted opinions. I'm Mike Hadlow, an itinerant developer. I live near Brighton on the south coast of England.

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 - December (5)
 - November (5)
 - October (2)
 - September (4)



Closing thoughts



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Takeaways



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Takeaways

- Build a shell for the content to drive the app
- Enable features, styling and customization - driven by config changes
- Focus on productivity and enabling your business goals



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Thank you for your time!

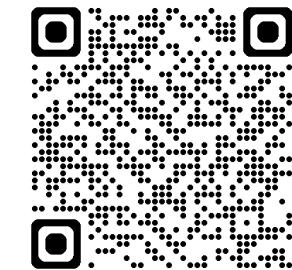
 Mark Allibone

 @mallibone.com

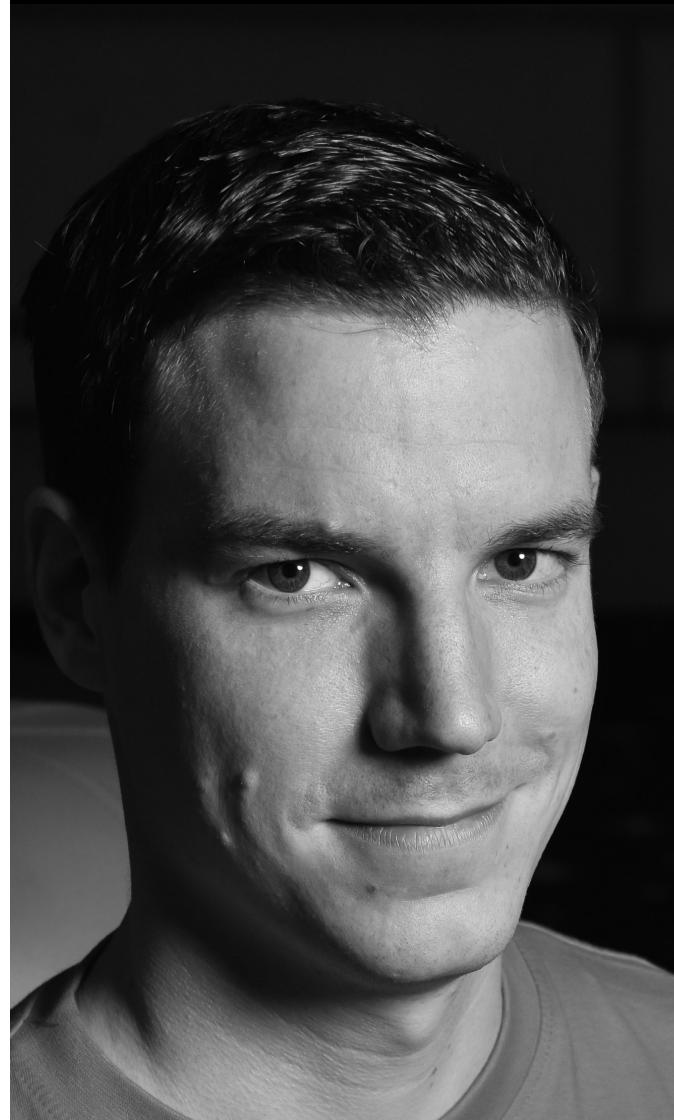
 iDIP Solution

 <https://mallibone.com>

 <https://nullpointers.io>



Samples and Slides





Thank you for your time!

 Mark Allibone

 @mallibone.com

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 <https://nullpointers.io>

 SpreeView



Review my Session





SpreaView



Review my Session