Localization in SwiftUI

Testing any languages & regions in seconds

*@BenoitPasquier_* - iOSConfSG 2021

Hi, I’m Ben 🇫🇷

Senior Software Engineer @ SHOPBACK

Agenda

- Localization? 🤔
- SwiftUI & Xcode Preview 🛠
- Automation Testing 🤖

Localization? 🤔

Localization? 🤔

175

countries & regions

40

languages

Localization? 🤔

Bonjour

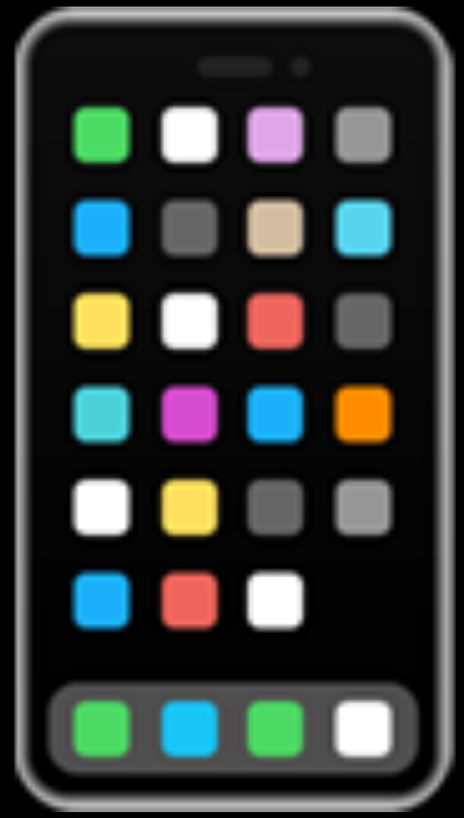
你好

Hello

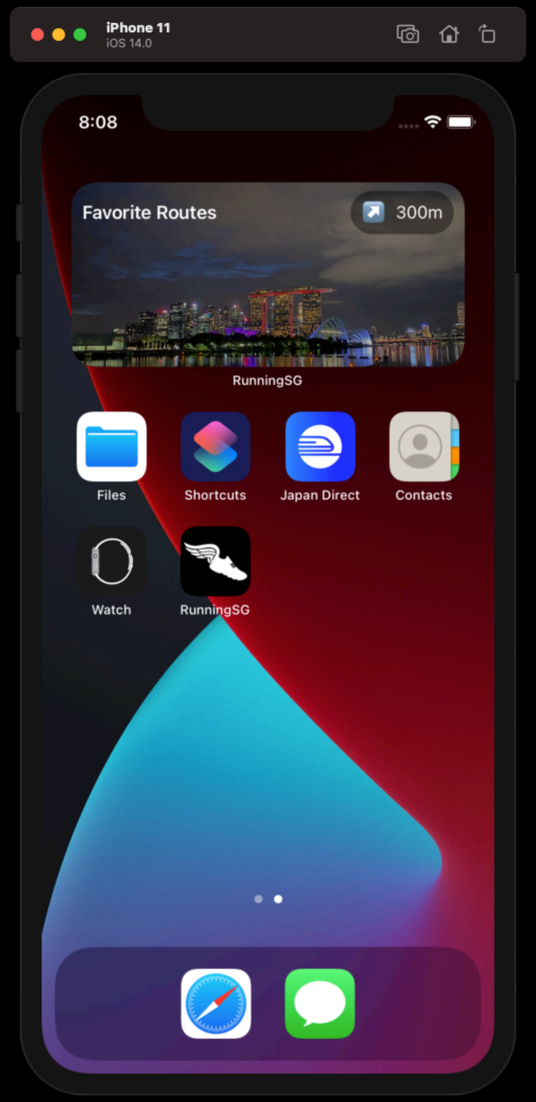
Hallo

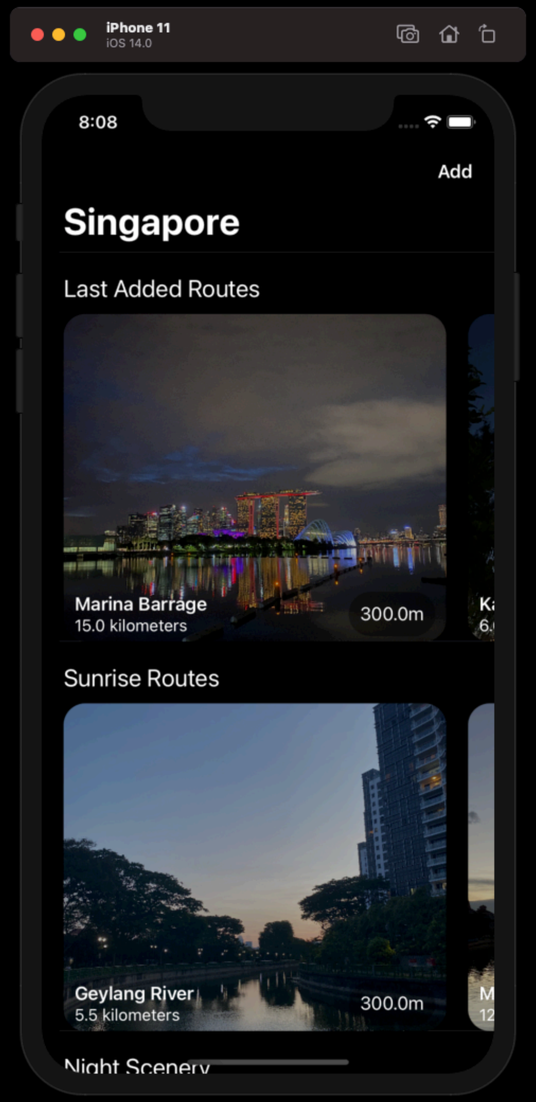
Olá

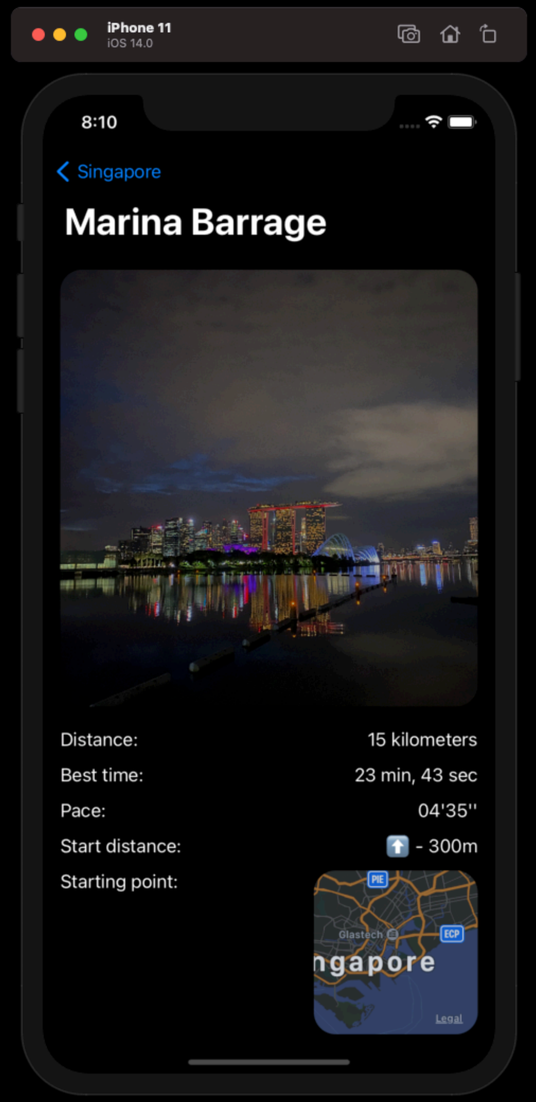
Ciao



SwiftUI and Xcode Preview 🛠


iPhone 11
iOS 14.0
8:08
Favorite Routes
300m
RunningSG
Files
Shortcuts
Japan Direct
Contacts
Watch
RunningSG


iPhone 11
iOS 14.0
8:08
Add
Singapore
Last Added Routes
Marina Barrage
15.0 kilometers
300.0m
Sunrise Routes
Geylang River
5.5 kilometers
300.0m
Night Scenery


iPhone 11
iOS 14.0
8:10
Singapore
Marina Barrage
Distance:
15 kilometers
Best time:
23 min, 43 sec
Pace:
04'35''
Start distance:
- 300m
Starting point:
PIE
ECP
Legal

LocalizedStringKey 🔡

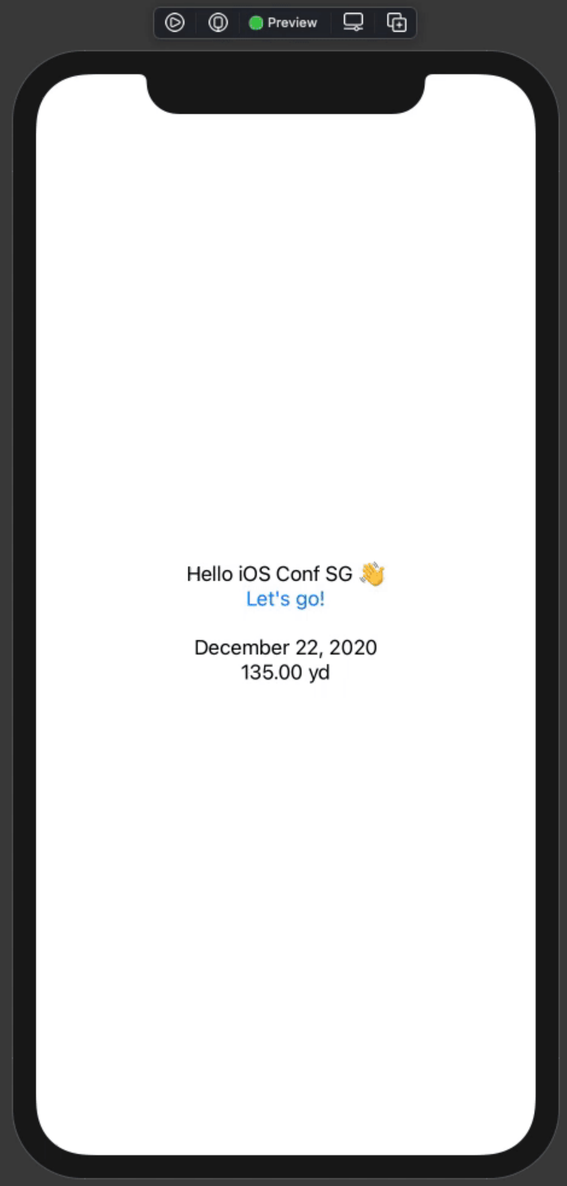
- Text
- TextField
- Button
- Navigation Title
- Navigation Link

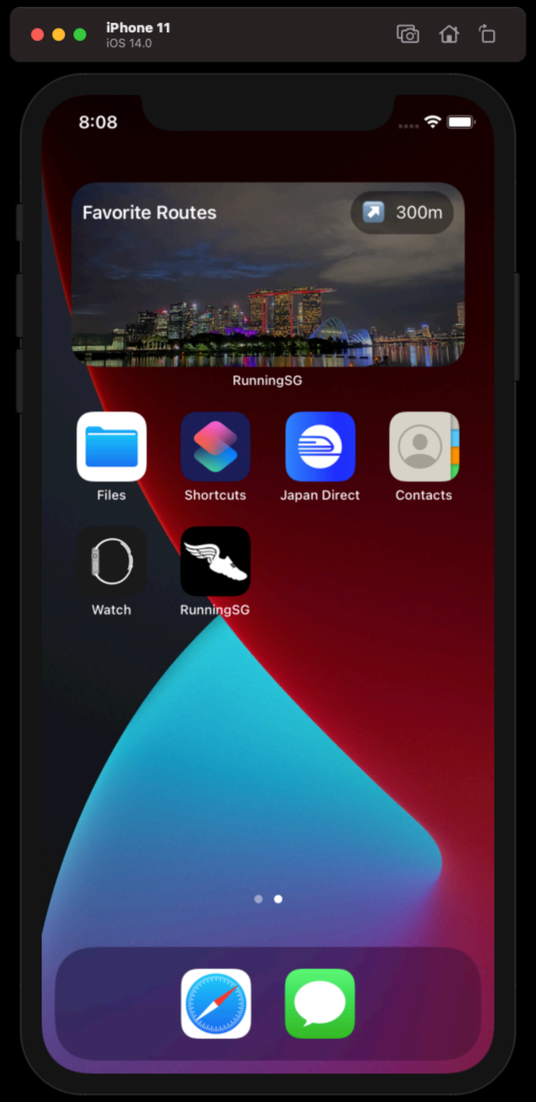
```
struct ContentView: View {
    var body: some View {
        Group {
            Text(key: LocalizedStringKey)
            Button(titleKey: LocalizedStringKey, action: { })
        }
    }
}
```

Text 🔠

- Date and Style
- Formatter, ReferenceConvertible & NSObject
- Date Range
- Date Interval

```swift
//
//  Created by Benoit PASQUIER on 22/12/2020.
//

import SwiftUI

struct SampleView: View {
    let formatter: LengthFormatter
    let subject: NSNumber

    init() {
        self.formatter = LengthFormatter()
        self.formatter.numberFormatter.minimumFractionDigits = 2
        self.formatter.numberFormatter.maximumFractionDigits = 2

        self.subject = NSNumber(value: 123.45)
    }
    var body: some View {
        VStack(spacing: 20) {
            VStack {
                Text("Hello iOS Conf SG")
                Button("Let's go!", action: { })
            }

            VStack {
                Text(Date(), style: .date)
                Text(subject, formatter: formatter)
            }
        }
    }
}

struct SampleView_Previews: PreviewProvider {
    static var previews: some View {
        SampleView()
            .environment(\.locale, Locale(identifier: "en"))
    }
}
```

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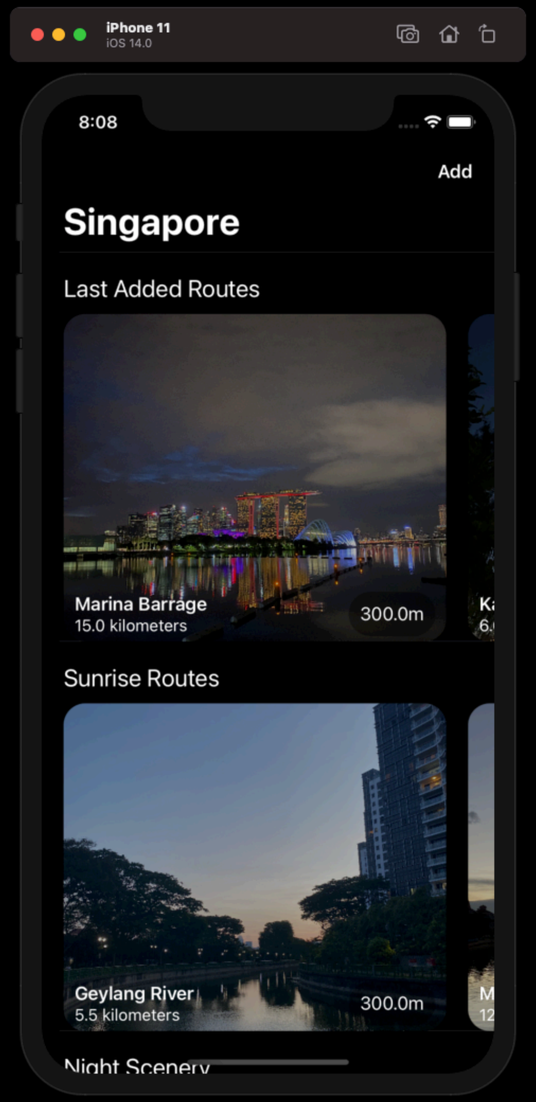
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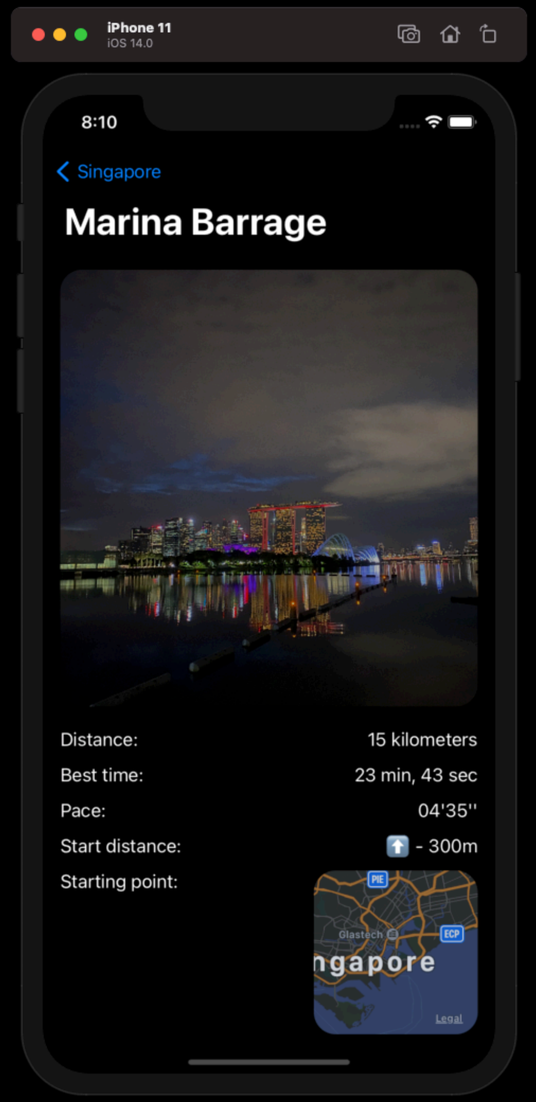
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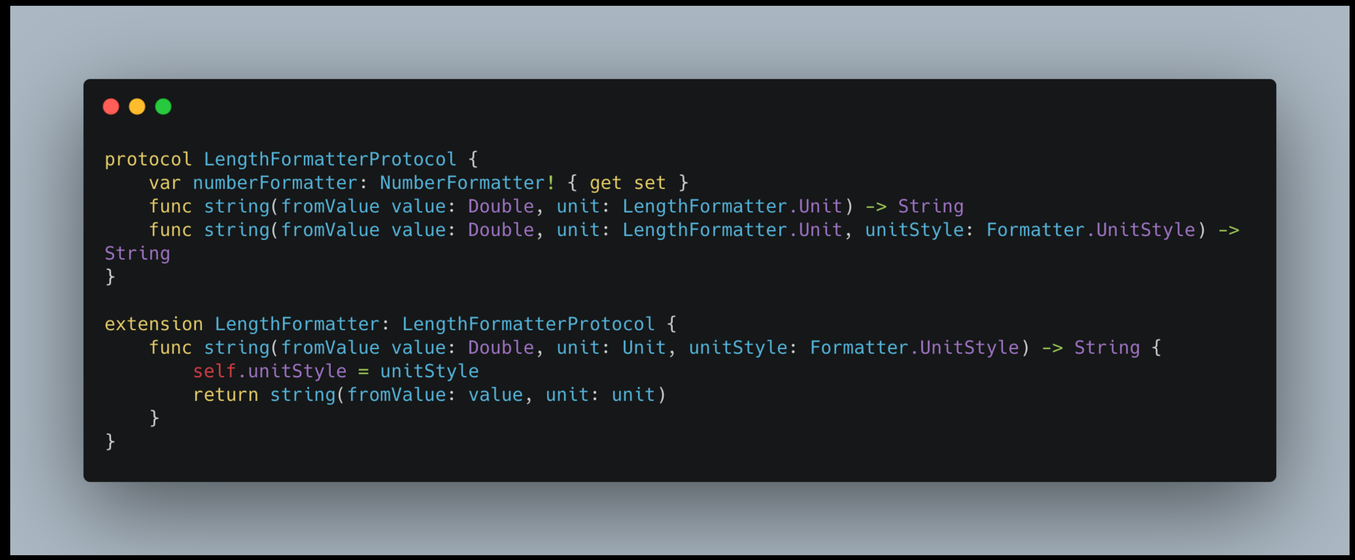
Demo 📹

Localization Preview ⚠️

- String type
- Formatters
- String.localizedStringWithFormat(…) 😭

Preview Workaround 🪛

- LocalizedStringKey everything
- Abstraction
- Code generation



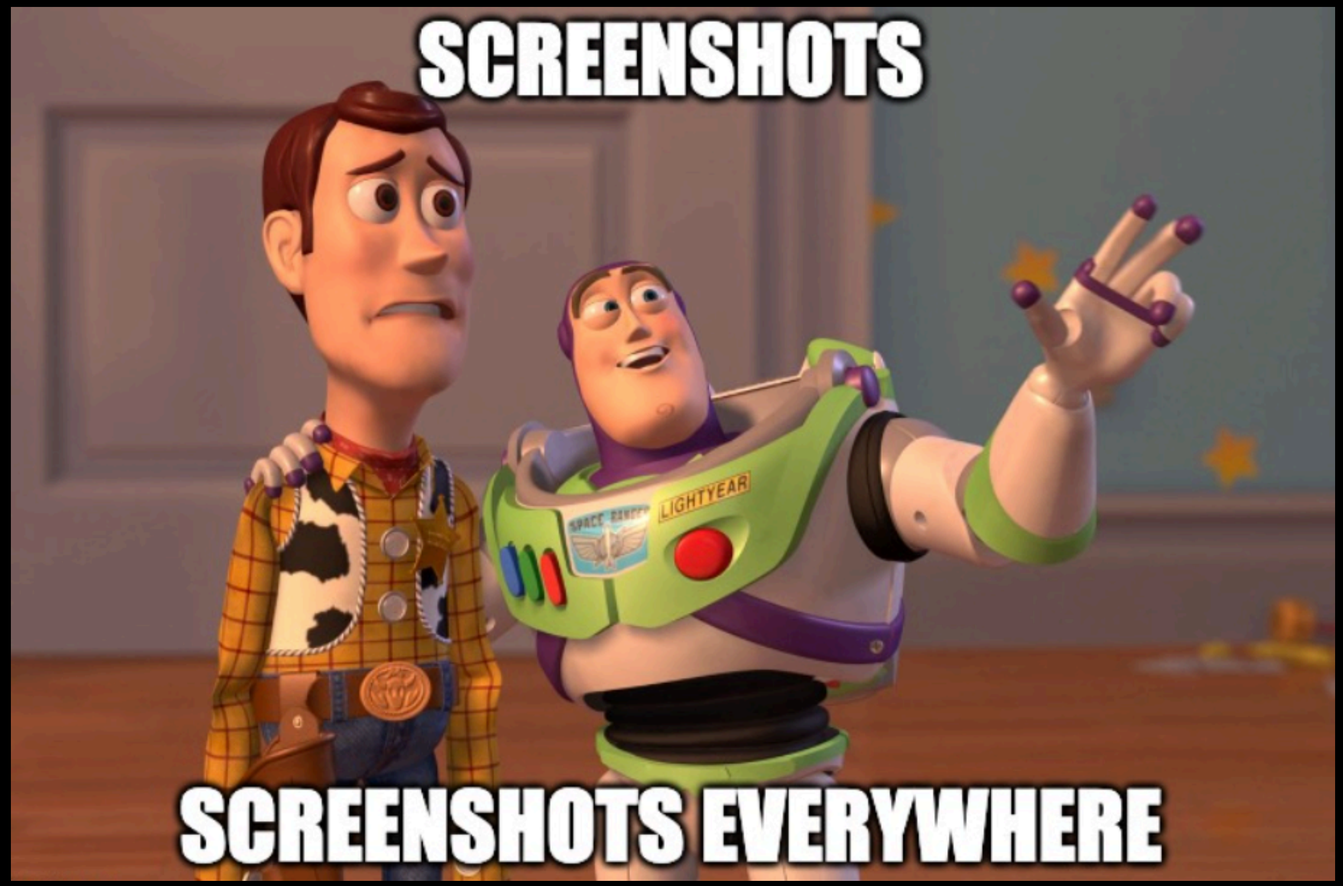
```
protocol LengthFormatterProtocol {
    var numberFormatter: NumberFormatter! { get set }
    func string(fromValue value: Double, unit: LengthFormatter.Unit) -> String
    func string(fromValue value: Double, unit: LengthFormatter.Unit, unitStyle: Formatter.UnitStyle) ->
String
}

extension LengthFormatter: LengthFormatterProtocol {
    func string(fromValue value: Double, unit: Unit, unitStyle: Formatter.UnitStyle) -> String {
        self.unitStyle = unitStyle
        return string(fromValue: value, unit: unit)
    }
}
```

Demo 📹

Automation Testing 🤖

Automation Testing 🤖



Demo 📹

Conclusion

- Localization 🌎
- SwiftUI & Xcode Preview 🛠
- Automation Testing 🤖

Thanks

Find me @BenoitPasquier_
and https://benoitpasquier.com