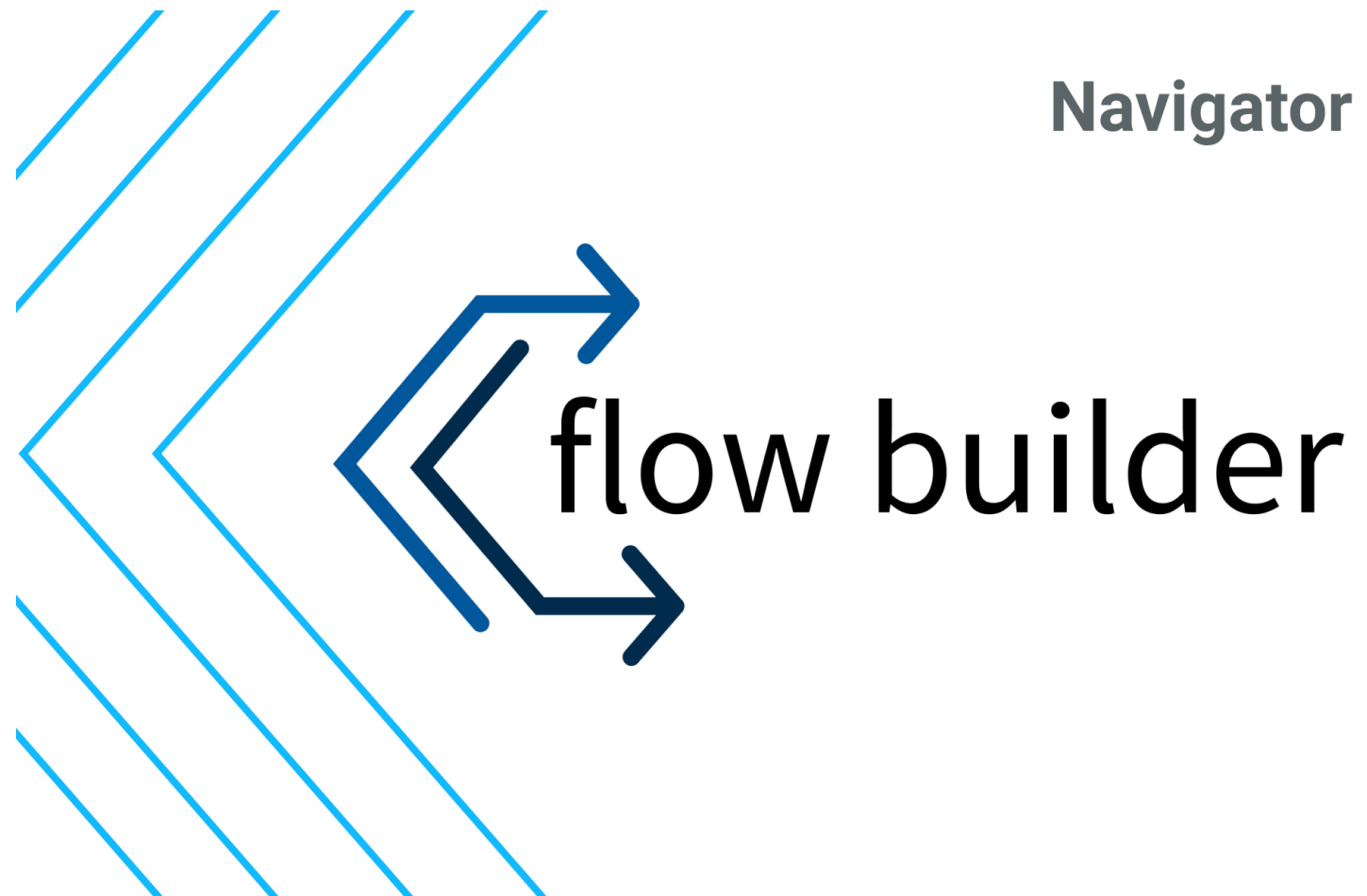


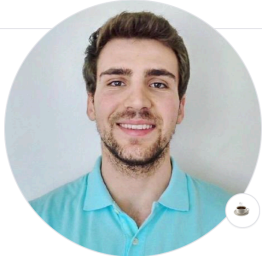
Navigator 2.0



Go with the Flow using Navigator 2.0

**Felix Angelov @ Very Good Ventures**

# Very Good Ventures, Chicago 🕶️🦄



**Felix Angelov**  
felangel

software engineer by day, software engineer by night.

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**Highlights**

✳ Arctic Code Vault Contributor

☆ PRO

**Organizations**



Overview Repositories 77 Projects


felangel / README.md

Hi there 🙌


I'm a software engineer at [Very Good Ventures](#) in Chicago, IL 🇺🇸


- 👩🏫 I'm currently working on the [bloc library](#)
- ☕ I'm learning how to make latte art
- 👤 I'm looking to collaborate on open source projects
- 💬 Ask me about [Flutter](#) and [Dart](#).
- 🗨 Pronouns: he/him/his
- ⚡ Fun fact: I have a pet bunny named Coco 🐰

**Pinned**


 **bloc**


A predictable state management library that helps implement the BLoC design pattern

 5.3k 1.2k


 **bloc.js**


A predictable state management library that helps implement the BLoC design pattern in JavaScript

 67 8


 **equatable**


Simplify Equality Comparisons | A Dart abstract class that helps to implement equality without needing to explicitly override == and hashCode.

 377 37

 **fresh**


🍌 A token refresh library for Dart.


 92 7

 **flutter**


Forked from flutter/flutter

Flutter makes it easy and fast to build beautiful mobile apps.

 1

 **sealed\_flutter\_bloc**




flutter\_bloc state management extension that integrates sealed\_unions.

 45 4



<https://verygood.ventures>

# Agenda

-  Intro to FlowBuilder
-  How to use it
-  Demo

# package:flow\_builder

flow\_builder 0.0.1-nullsafety.0 

Published Jan 26, 2021 [Null safety](#)

[FLUTTER](#) [ANDROID](#) [IOS](#) [WEB](#)

 55

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Flutter Flows made easy!

 build [passing](#) coverage [100%](#) pub [v0.0.1-nullsafety.0](#)

55 | 110 | 82%  
LIKES | PUB POINTS | POPULARITY

## Metadata

Flutter Flows made easy!  
A Flutter package which  
simplifies flows with a  
flexible, declarative API.

[Repository \(GitHub\)](#)

[View/report issues](#)

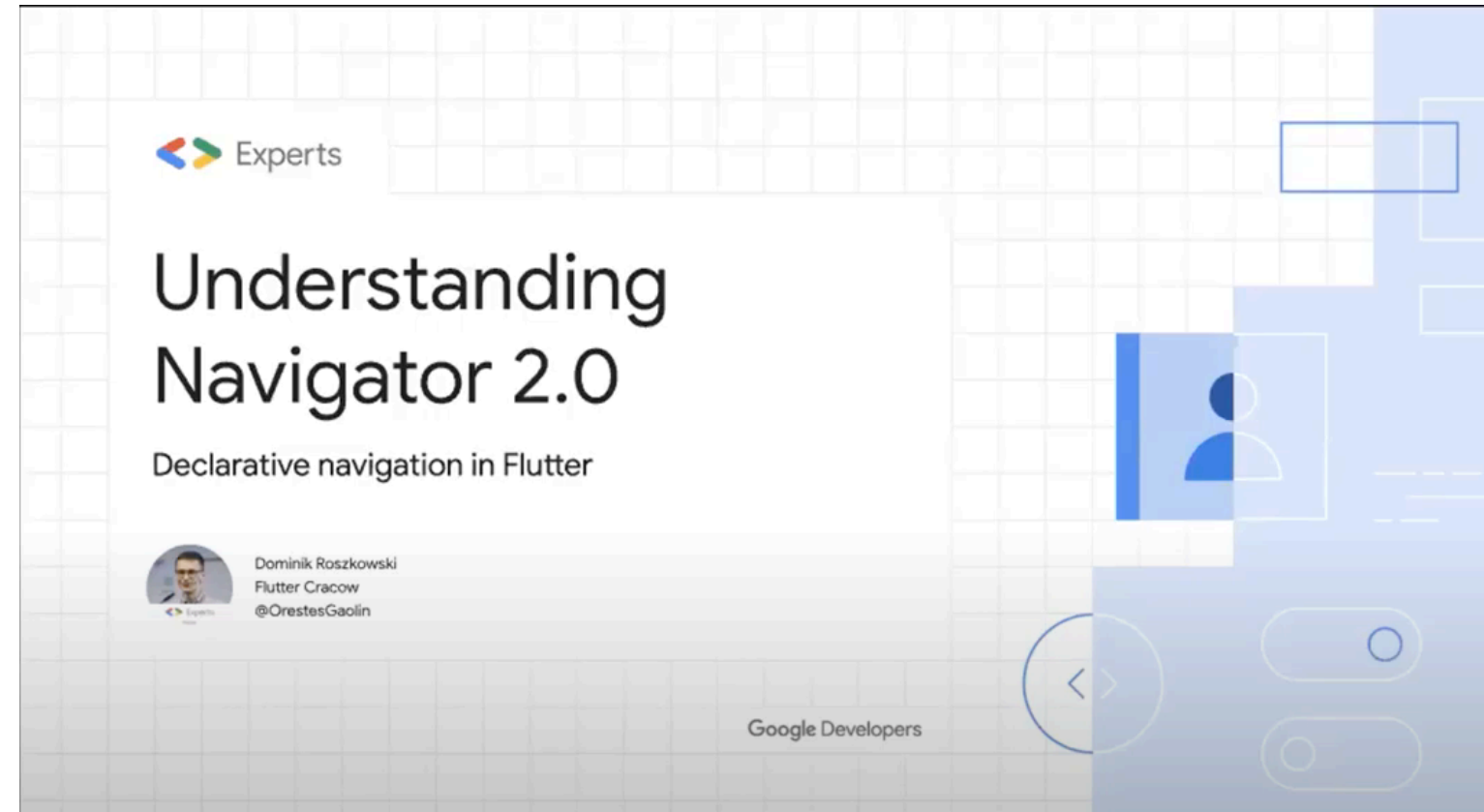
## Documentation

# What is FlowBuilder? 🙋

? ? ?

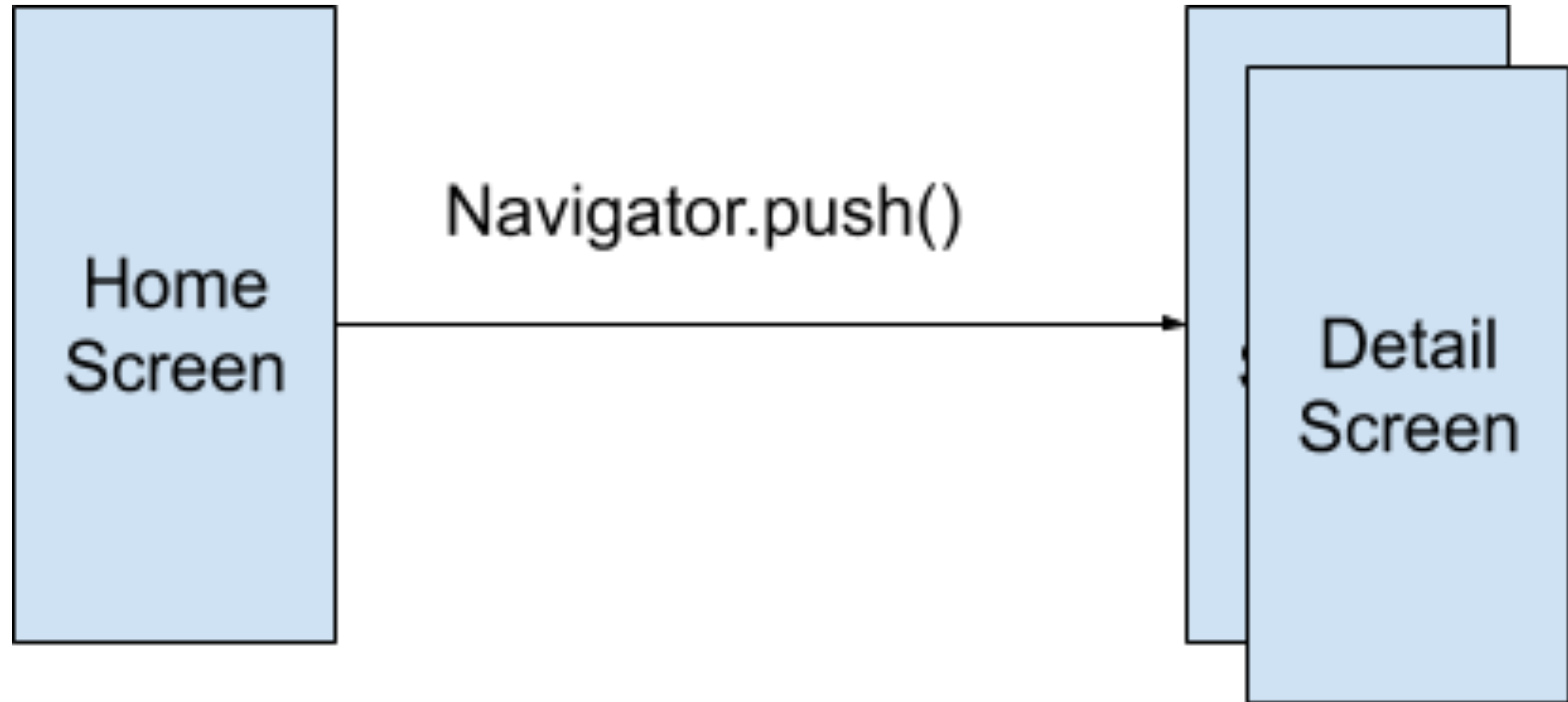
# Navigator 2.0 Pages API Abstraction

# In Depth Look at Navigator 2.0



<https://youtu.be/GxoFl5kzJgE>

# Why Navigator 2.0 Pages API Abstraction?





# Why Navigator 2.0 Pages API Abstraction?

```
// Return a Navigator with a list of Pages representing the current app state.
```

```
return Navigator(  
  key: navigatorKey,  
  onPopPage: _handlePopPage,  
  pages: [  
    MaterialPageBuilder(  
      key: ValueKey<String>('home'),  
      builder: (context) => HomePageWidget(),  
    ),  
    if (state.searchQuery != null)  
      MaterialPageBuilder(  
        key: ValueKey<String>('search'),  
        builder: (context) => SearchPageWidget(),  
      ),  
    if (state.stockSymbol != null)  
      MaterialPageBuilder(  
        key: ValueKey<String>('details'),  
        builder: (context) => DetailsPageWidget(),  
      ),  
  ],  
);
```

# Why Navigator 2.0 Pages API Abstraction?

"We hope that you'll join us in exploring what a higher-level API built on top of these features can do for users."

- John Ryan

# Why FlowBuilder?

- Small API Surface
- Pages = Function(State)
- Decouple Routing Logic from Widget Tree
- Flexible, Declarative API

# Why FlowBuilder Cont.?

- Handles System Navigation
  - Android Hardware Back
  - iOS Edge Swipe
- Use alone or with existing state management
- Unit Test Routing Logic
- Widget Test Flows

How do I use it? 🤔

# Add package:flow\_builder

- Add the dependency to your `pubspec.yaml`

dependencies:

  flow\_builder: ^0.0.1-dev.13

\$ flutter packages get

# Define Flow State

```
class Profile {  
  const Profile({this.name, this.age});  
  
  final String name;  
  final int age;  
  
  Profile copyWith({String name, int age}) {  
    return Profile(  
      name: name ?? this.name,  
      age: age ?? this.age,  
    );  
  }  
}
```

- What is driving the navigation?

# Create a FlowBuilder

```
return FlowBuilder(  
  state: const Profile(),  
  onGeneratePages: (Profile state, List<Page> pages) {  
    return [  
      ProfileName.page(),  
      if (state.name != null) ProfileAge.page(),  
    ];  
  },  
);
```

- Think of it like a Navigator widget



# Tip: Create Static Page Methods

```
class ProfileName extends StatefulWidget {  
    static MaterialPage page() => MaterialPage(child: ProfileName());  
  
    @override  
    _ProfileNameState createState() => _ProfileNameState();  
}  
  
// Later...  
final page = ProfileName.page();
```



## Tip: Extract Routing Logic

```
return FlowBuilder(  
  state: const Profile(),  
  onGeneratePages: onGenerateProfilePages,  
);  
  
// Easy to Unit Test the Routing Logic  
List<Page> onGenerateProfilePages(Profile state, List<Page> pages) {  
  return [  
    ProfileName.page(),  
    if (state.name != null) ProfileAge.page(),  
  ];  
}
```

# Optionally, Provide your own FlowController

```
final controller = FlowController(const Profile());  
...  
return FlowBuilder(  
  controller: controller,  
  onGeneratePages: (Profile state, List<Page> pages) {  
    return [  
      ProfileName.page(),  
      if (state.name != null) ProfileAge.page(),  
    ];  
  },  
);  
...  
void dispose() {  
  controller.dispose();  
  super.dispose();  
}
```

# Look Up the FlowController 🙄

```
@override  
Widget build(BuildContext) {  
  final controller = context.flow<Profile>();  
}
```

- Access the FlowController from within the subtree using the flow extension on BuildContext

# Update the Flow State

```
OutlineButton(  
  child: Text('Update Name'),  
  onPressed: () {  
    context.flow<Profile>().update((profile) {  
      return profile.copyWith(name: 'Felix');  
    });  
  },  
);
```

- Triggers onGeneratePages with the updated state.

# Complete the Flow 🏁

```
OutlineButton(  
  child: Text('Update Age'),  
  onPressed: () {  
    context.flow<Profile>().complete((profile) {  
      return profile.copyWith(age: 26);  
    });  
  },  
);
```

- Pops the entire flow and returns the resulting state.

# Try it with Sound Null Safety Today!

flow\_builder 0.0.1-nullsafety.0 

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Documentation

dependencies:

flow\_builder: ^0.0.1-nullsafety.0

# Start a Discussion! 🙌

 felangel / flow\_builder

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Help

Ideas

Show and tell

Most helpful

Be sure to mark someone's comment as an answer if it helps you resolve your question — they deserve the credit! 💖

[Community guidelines](#)


[pub.dev/packages/flow\\_builder](#)

Beta [Give feedback](#)

1

Welcome to flow\_builder Discussions!

felangel started 3 days ago in Ideas




0

1

Back gesture shows a white screen on android instead of quitting the app

FredJul started on Dec 11, 2020 in Help · Unanswered




0

1

Recomended way to handle async splash pages with flow\_builder

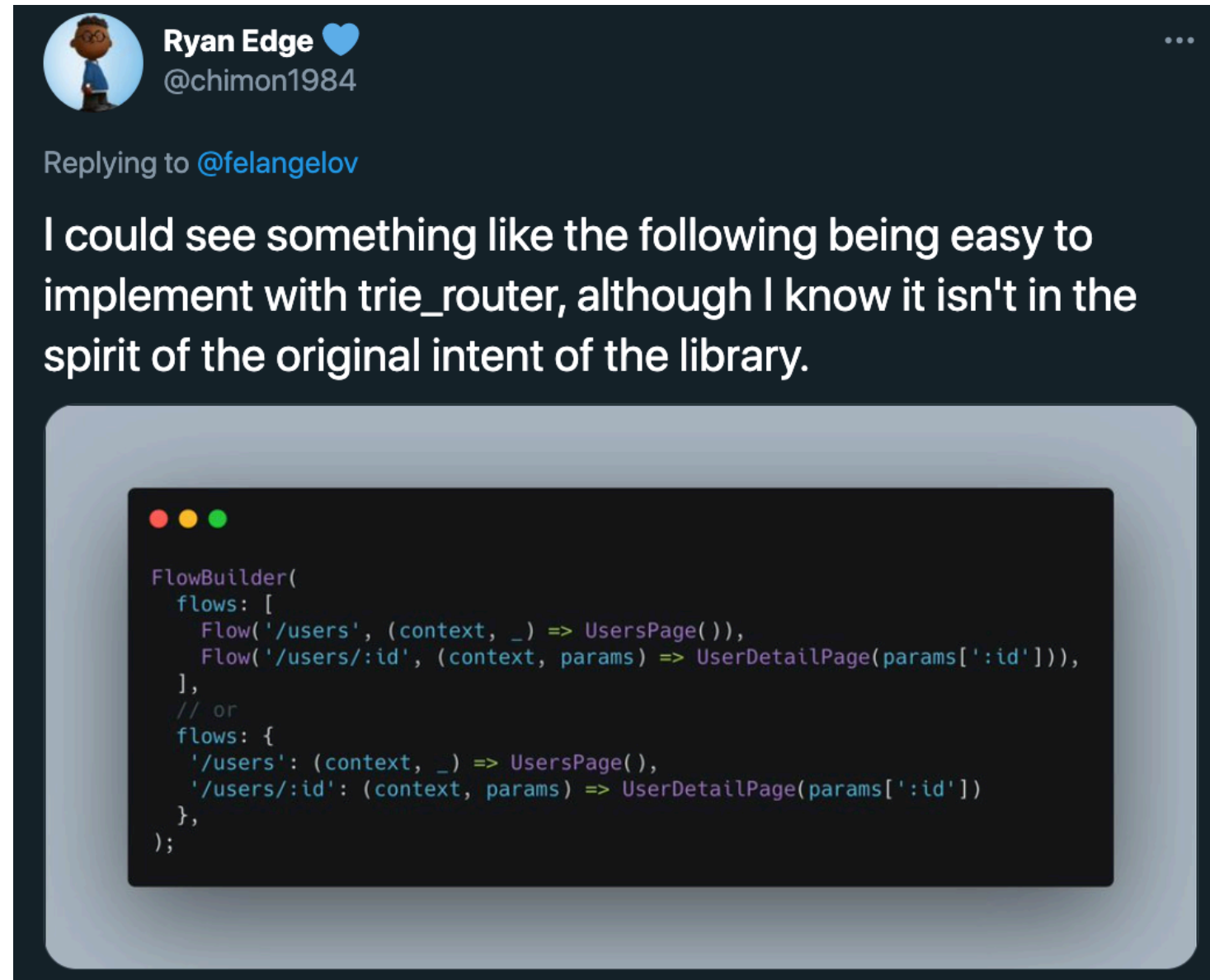
aytunch started on Dec 1, 2020 in Help · Unanswered

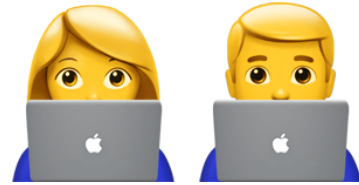


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# What's Next?





# Demo Time

[https://github.com/felangel/flutter\\_flows](https://github.com/felangel/flutter_flows)



Thank You!