



# Editing photos with Flutter

\_\_\_\_\_ or \_\_\_\_\_

How to use Flutter's  
Flexibility to create any  
layout model



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# Open Source

**photo\_view, bitmap, TRex Flutter...**

Contributed

**Flutter, Flame...**

# Communities

Brazil:

**Flutter Campinas (#Hack19)**

**Flutter SP**

Europe:

**Flutter Portugal** Sept 21

**FlutterLDN** Nov 11

**caraujo.me**



And we are hiring...

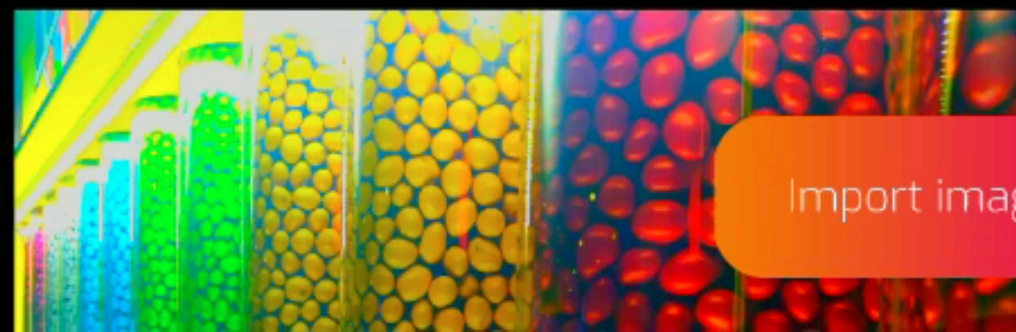




# LetsPicture

## LetsPicture

Projects



Import image





## Some backstory

- **WEB Development background**  
Flexible, Simple, Powerful And Open
- **Flutter got all of this**



# Some backstory

How to create an UI with Flutter: "Simple as your need"



## **Common widgets**

**Material, Cupertino,  
Flexbox, etc**

Almost all use cases





# Some backstory

How to create an UI with Flutter: "Simple as your need"



**If you need some  
extensibility**

**CustomPainter, Custom  
ScrollView, etc**

Let you customise output/behaviour  
among other widgets lifecycle



# Some backstory

How to create an UI with Flutter: "Simple as your need"

**"Render" widgets**

**RenderObjectWidget,  
ProxyWidget, etc**

If you need to create you own layout model



## Some use cases

- **Game Engine**
- **Data-driven view engine (*d3-ish*)**
- **Photo editor/composer**

# Framework

Widgets lifecycle  
Render objects  
Gesture arena  
Layout constraints

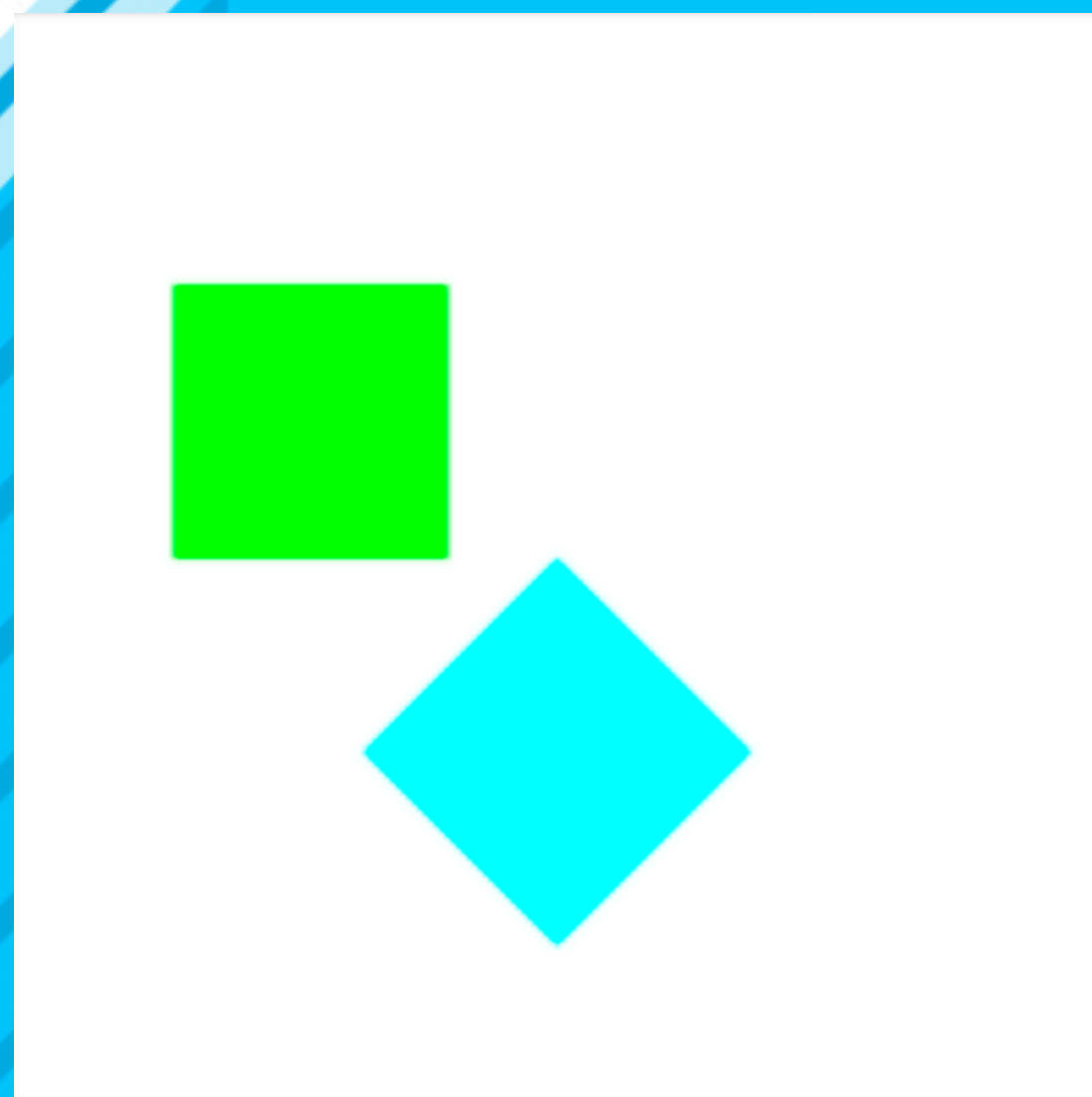
# Engine

App lifecycle  
Animations  
dart:ui

# Skia

Graphics engine  
Canvas-like API

# Platform Canvas



```
canvas.save();  
canvas.translate(30, 50);  
Rect rect = Rect.fromLTWH(0, 0, 50, 50);  
Paint paint = Paint()..color = Color(0xFF00FF00);  
canvas.drawRect(rect, paint);  
  
canvas.restore();  
canvas.translate(100, 100);  
canvas.rotate(45 * Math.pi / 180);  
Paint paint2 = Paint()..color = Color(0xFF00FFFF);  
canvas.drawRect(rect, paint2);
```



# Niks

Niks help you to create  
apps that generate images

## How it works

- Through **layers**, Niks paints compositions and can generate a final image
- Layers: RectLayer, BitmapLayer, Text layer... extensible!

## Examples

- Meme generator
- Letspicture
- Undo/Redo example



## Niks

- Open source now
- Also Letspicture app
- Also Bitmap
- Oh, PhotoView still

# Future

- **Improvements on Niks**
- **Performance**
  - Dart FFI
- **WEB**
  - (WASM?) - [wasmrotate.surge.sh/](https://wasmrotate.surge.sh/)



Obrigado ❤️