



Editing photos with Flutter

_____ or _____

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



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Software Engineer
at **dashdash**
Fireslime

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...





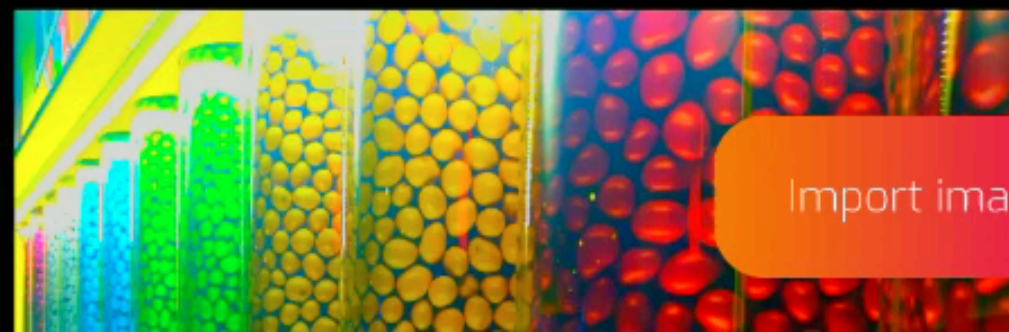
And we are hiring...



LetsPicture

LetsPicture

Projects



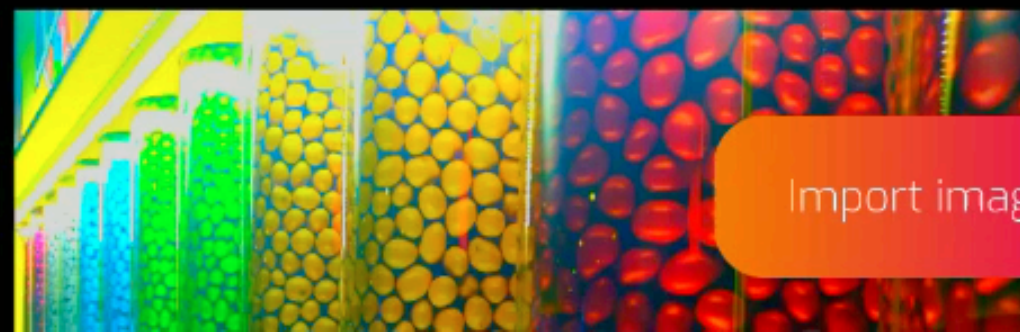
Import image



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

Framework

Widgets lifecycle
Render objects
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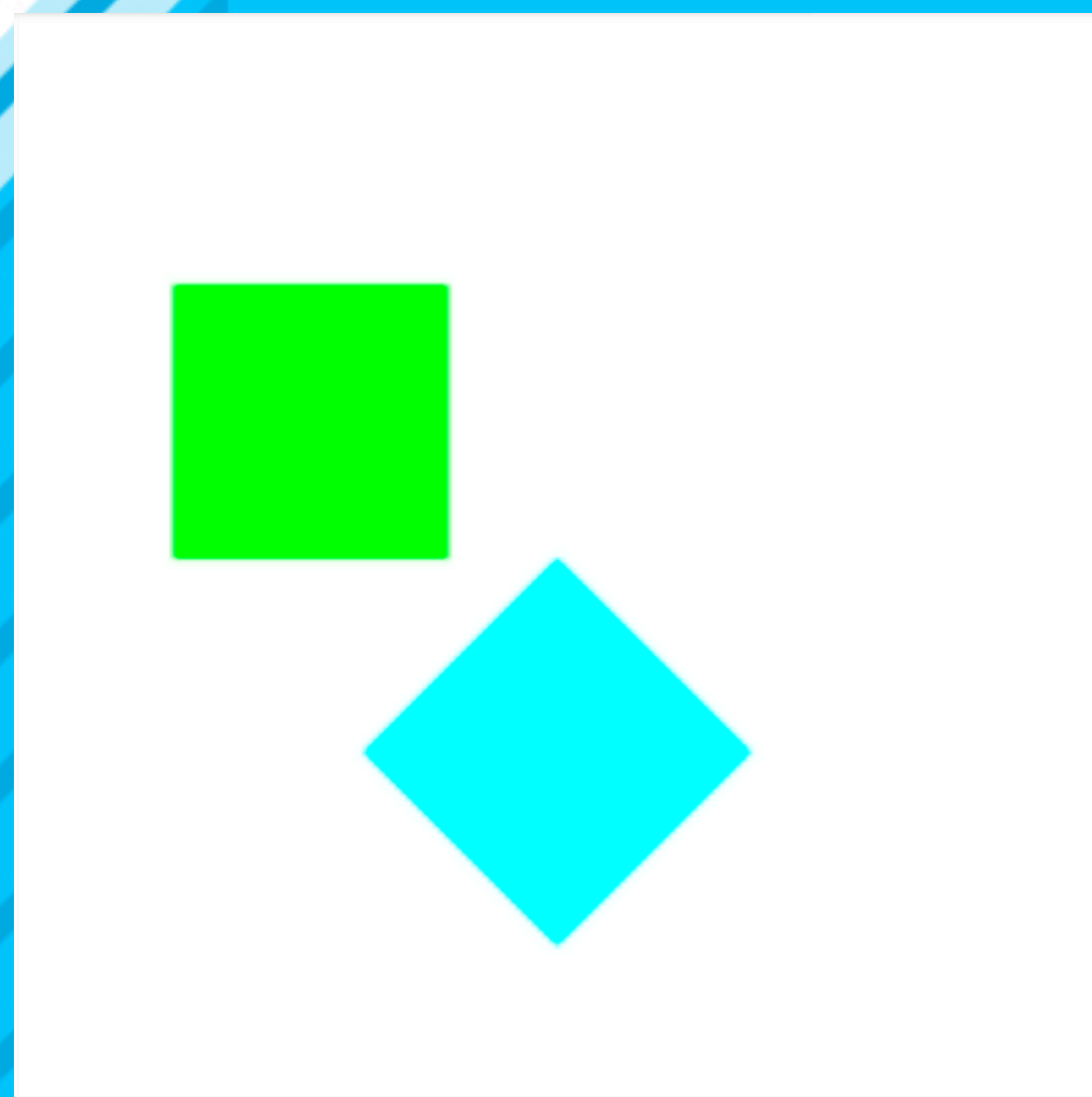
Engine

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/



Obrigado ❤️