



Cross-Platform Mobile Development with Flutter

A holistic and practical introduction

Master thesis (Nov. 2018-May 2019) topic:

State-of-the-Art Cross-Platform Mobile Frameworks

What is Flutter?

A cross platform frontend framework

– one code to rule them all!



iOS



android



Browser



Windows

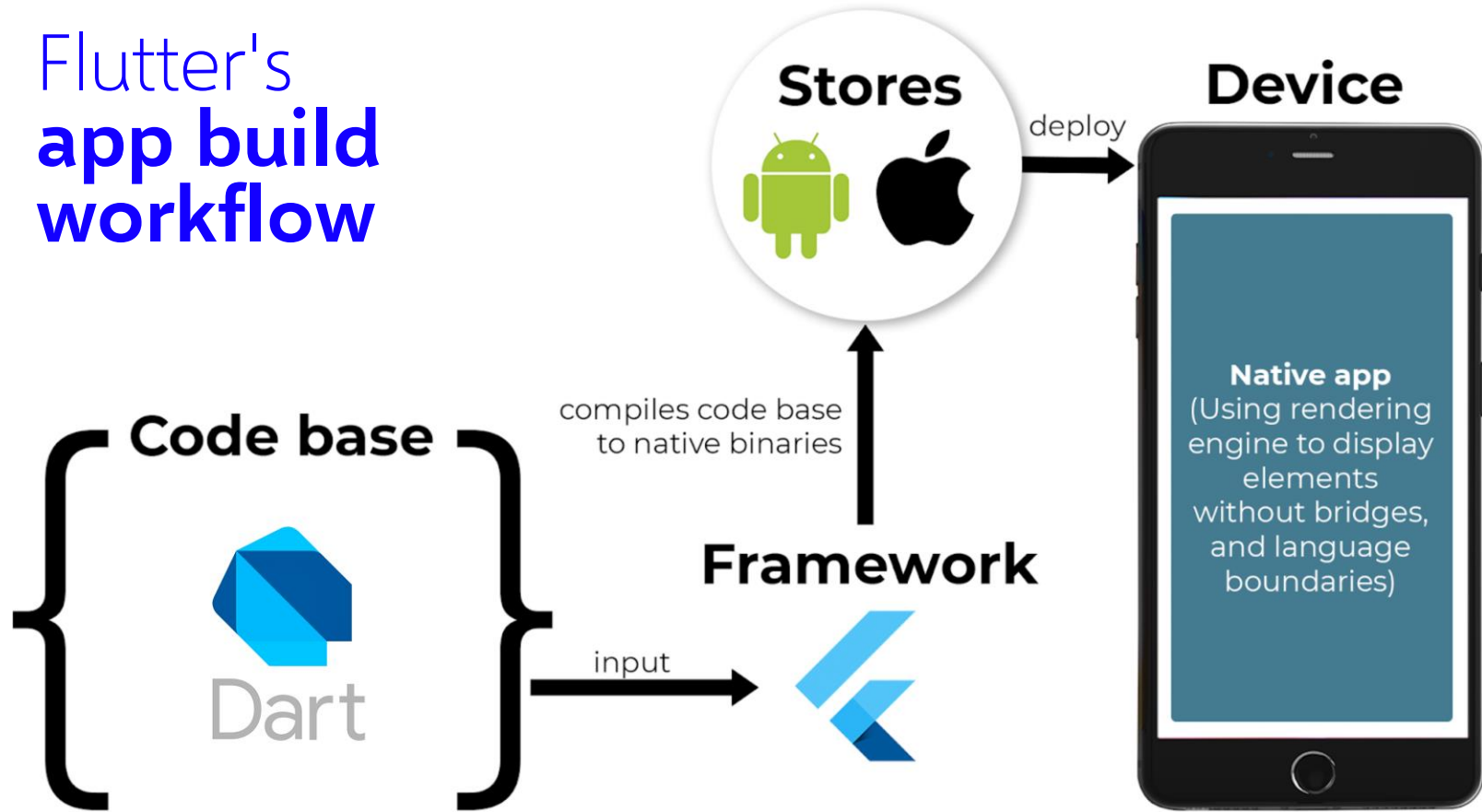


Mac

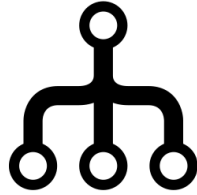


Linux

Flutter's app build workflow



Flutter App



Widget
composition



2D Engine



Dart Runtime

Transmit canvas

Transmit events

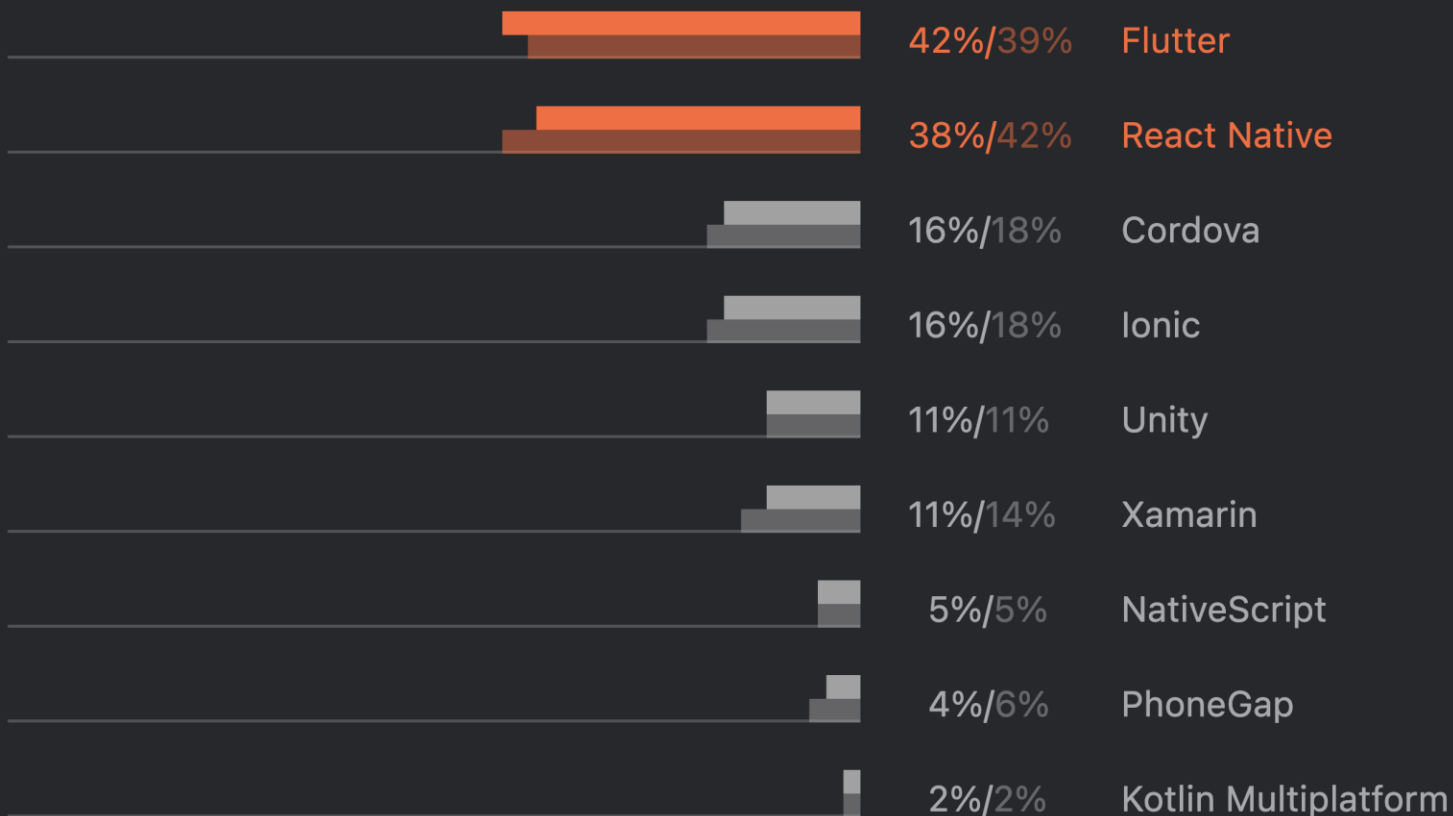
Platform

A text on a
rectangle above
the whole
platform canvas
resp. screen

Event Listener Btn

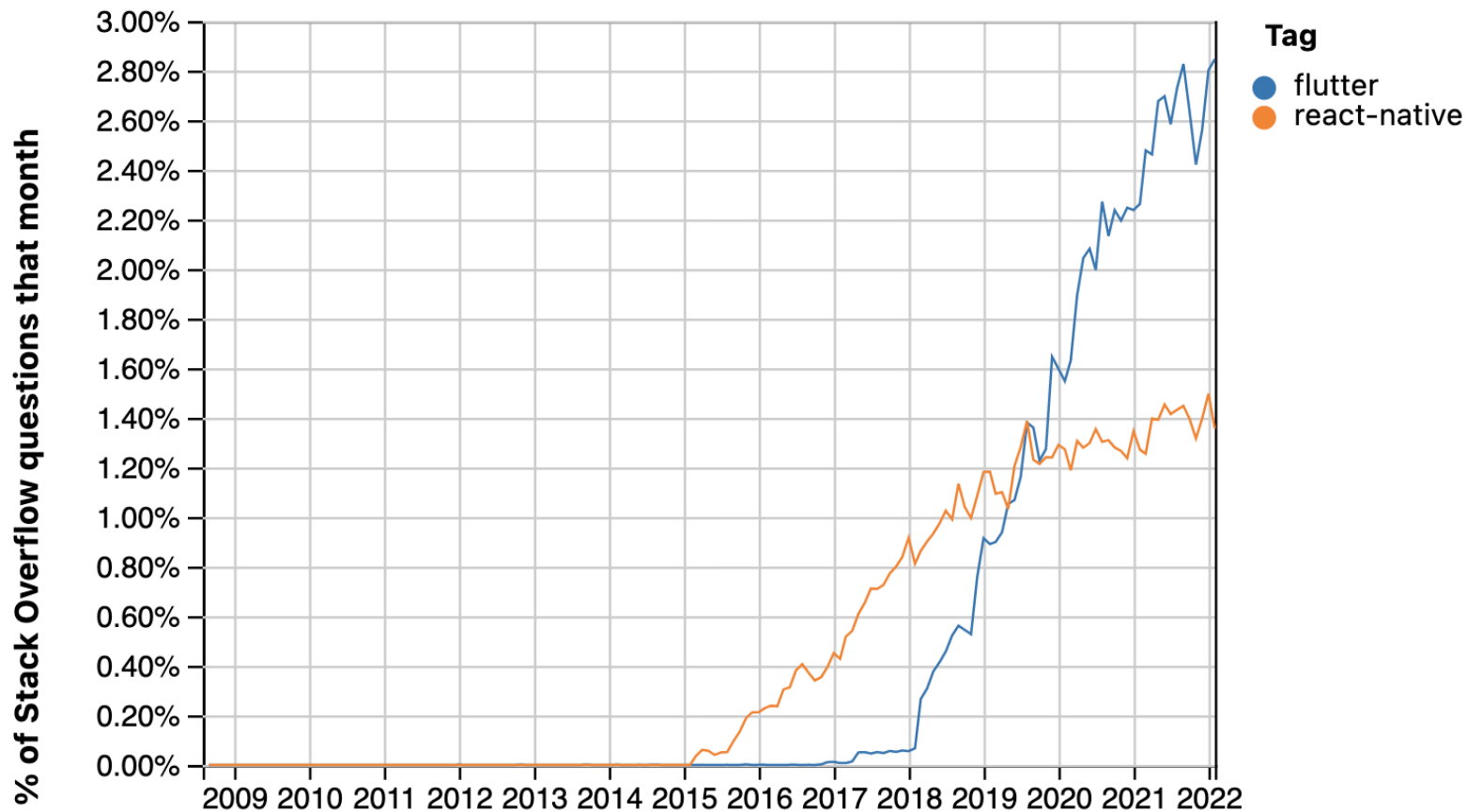
● 2021

● 2020



Source:

<https://www.jetbrains.com/devecosystem-2021/miscellaneous/>



Source: <https://insights.stackoverflow.com/trends?tags=flutter%2Creact-native>

Why no other cross-platform Framework?

1

Stable and **efficient** development experience

2

Great **tooling**, **linting** and **code completion**

3

Best performance – but weaker than native

4

Beautiful standard UI elements

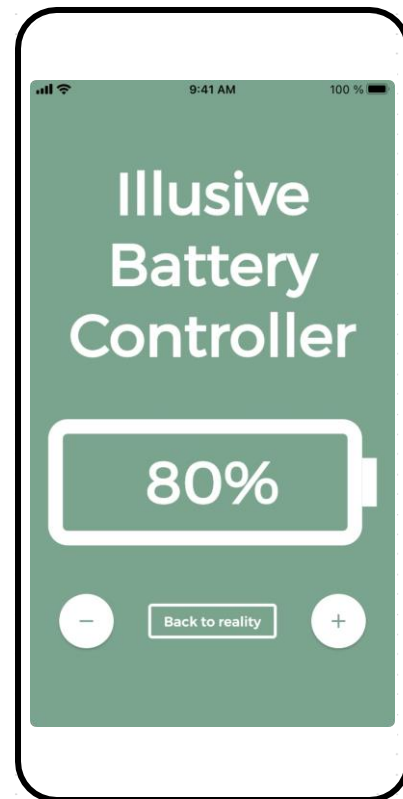
5

High productivity and **flexibility** – especially on UI development

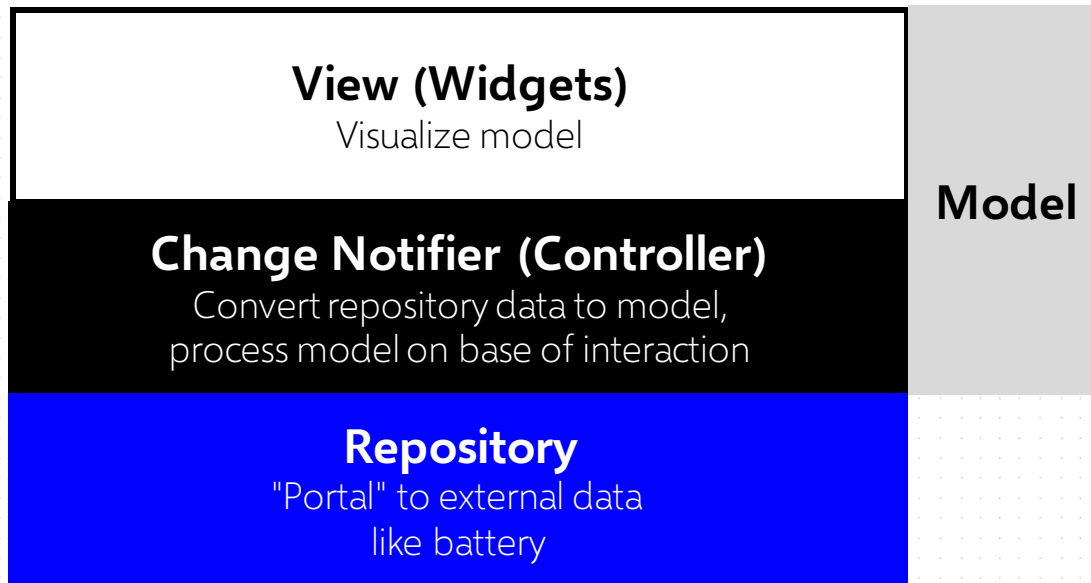
Let's do some...

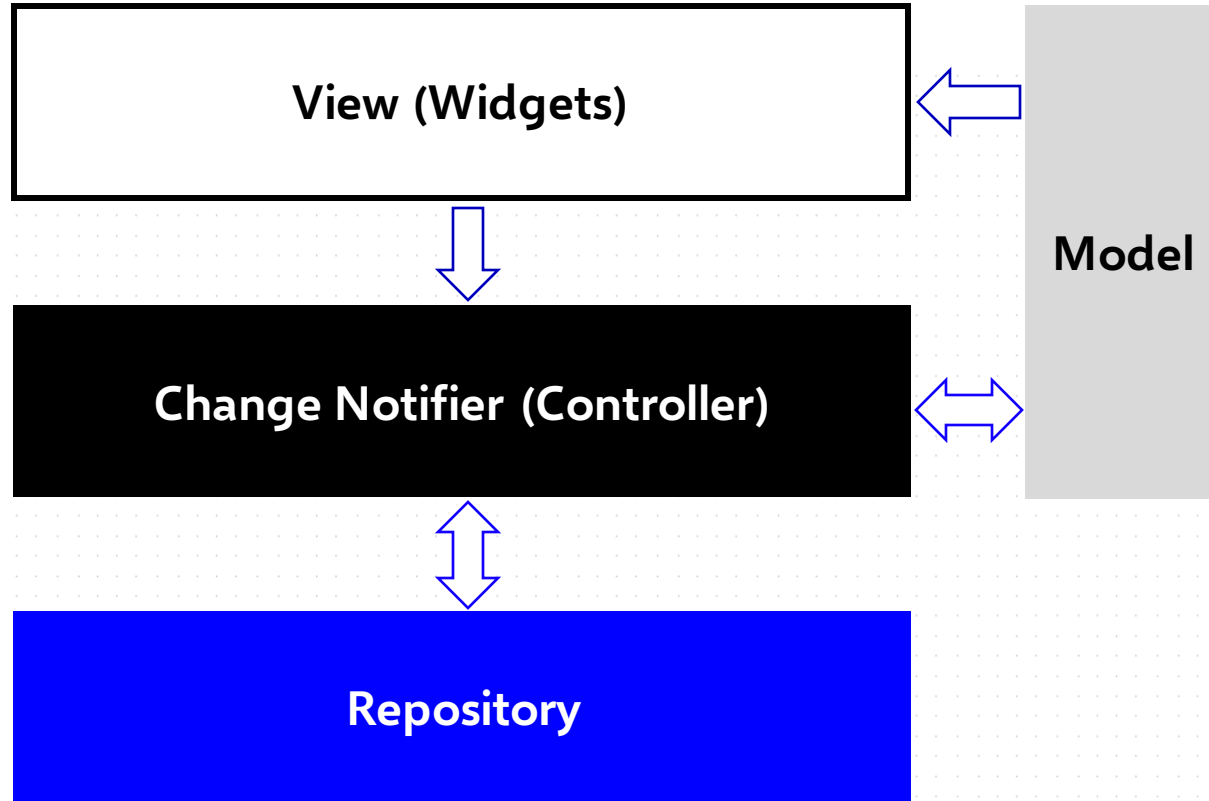
**LIVE
COPYING!**

https://github.com/christofkost/illusive_battery_controller



Our app architecture

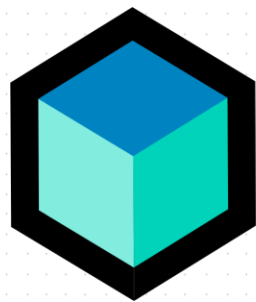




Flutter and state management



provider



bloc

MWAY