

# Flutter

Build beautiful native apps in record time

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# Flutter is Google's UI Framework

Helping developers craft high-quality native experiences across multiple platforms in record time.



# Challenges of mobile development today

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## “To the metal” approaches

- ✓ **High-quality apps**  
Platform and system integrations
- ✓ **High-performance UIs**  
Native code, GPU accelerated
- ✗ **Must fund two apps**  
Two teams, codebases, & investments
- ✗ **Inconsistent brand, features**  
Different across devices & OEMs

## “Cross platform” approaches

- ✓ **Fast development**  
Quick iterations, hot reload
- ✓ **Portability, reach**  
Single codebase
- ✗ **Poor Performance**  
Slow, jerky, unpredictable
- ✗ **Non-Native Look/Feel**  
Users can tell the difference



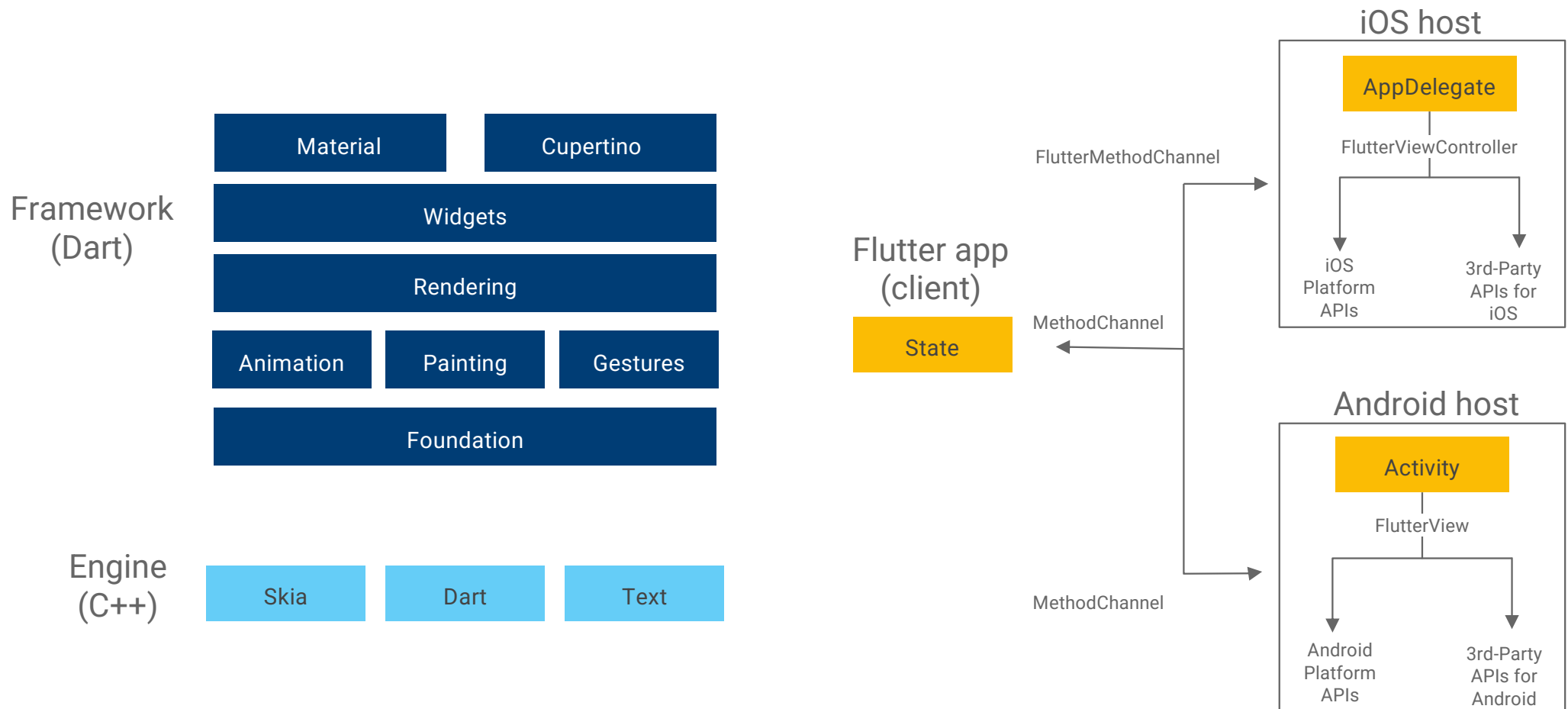
# Flutter offers the best of both worlds

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“Flutter combines  
**native performance and quality**  
with **high-velocity development**  
and **multi-platform reach**. ”



# Flutter is a modern UI toolkit for native apps





High-Velocity  
Development



Expressive and  
Flexible Toolkit



Native iOS and  
Android App



# High-velocity development

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Sub-second reload times

Paint your app to life

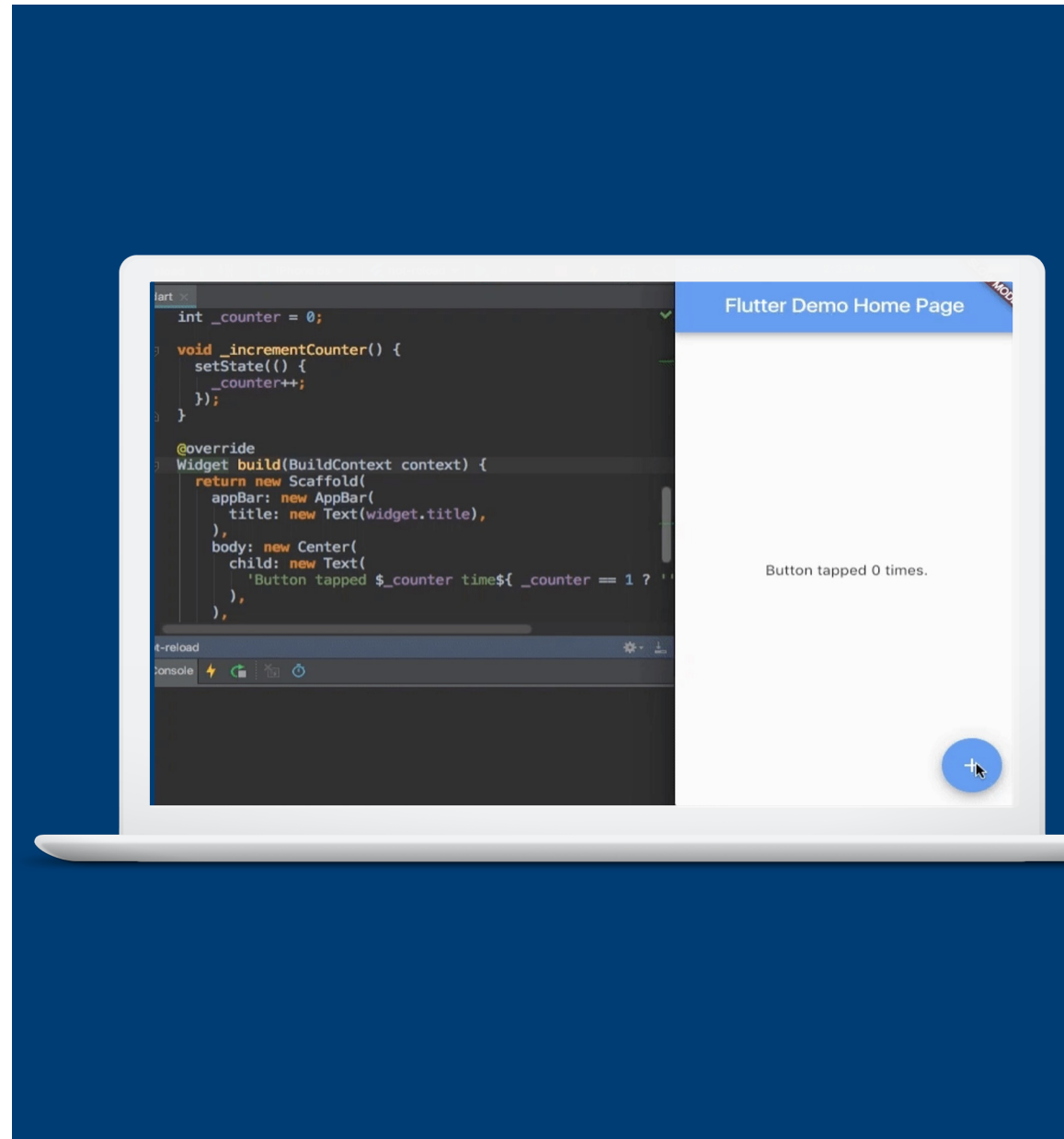
Iterate rapidly on features

Test hypotheses quicker than ever

More time to experiment & test features

Single-codebase for faster collab

**3X Productivity Gains**



# Flexibility and Control for beautiful UI's

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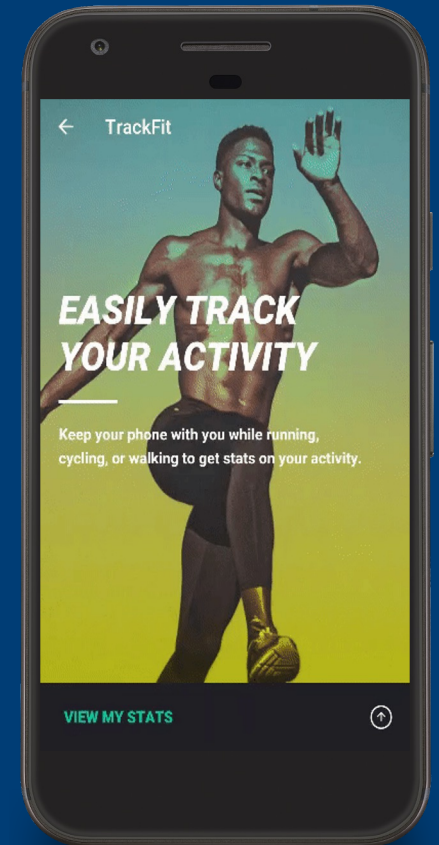
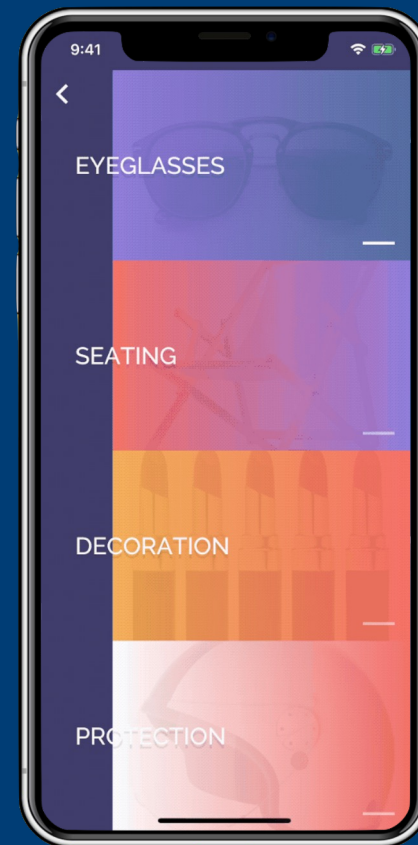
Control every pixel on the screen

Make your brand come to life

Never say "no" to your designer

Stand out in the marketplace

Win awards with beautiful UI





# Natively- Apps for iOS and Android

Compiles directly to native ARM code Does not use a JavaScript bridge

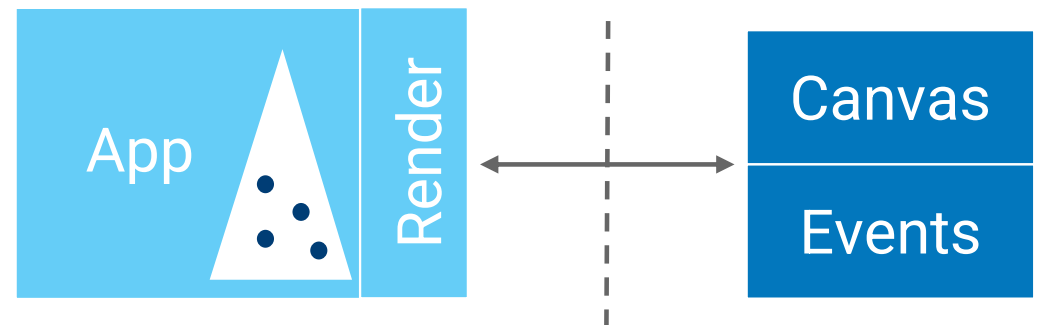
60fps, GPU accelerated

Smooth animations

Deep platform integrations

Natural look and feel

Critical platform differences  
(scrolling, navigation, fonts)



Compiles to ARM native code,  
GPU accelerated graphics

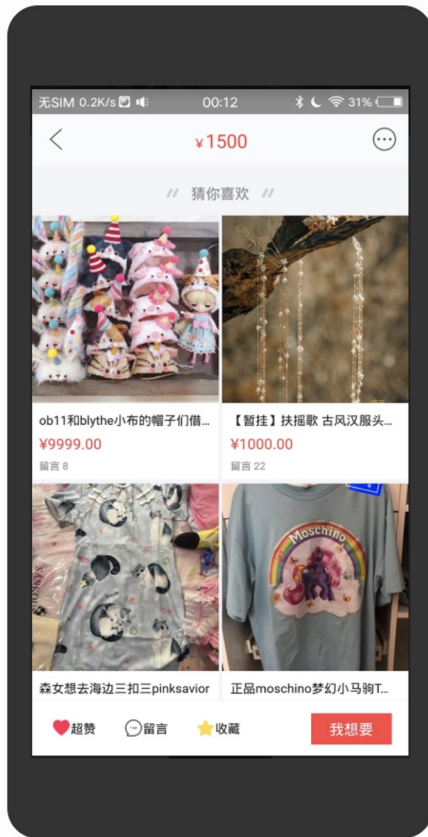


Built and used by Google, developers and companies around the world

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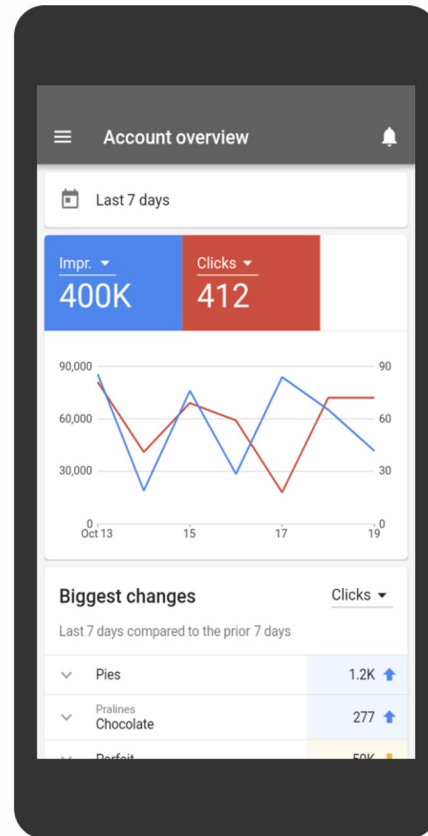


## Alibaba



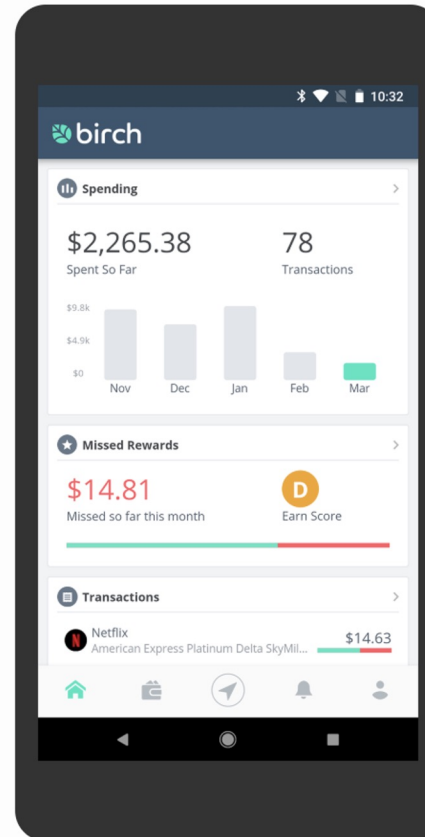
Alibaba's app incorporates Flutter to power parts of their app.

## Google AdWords



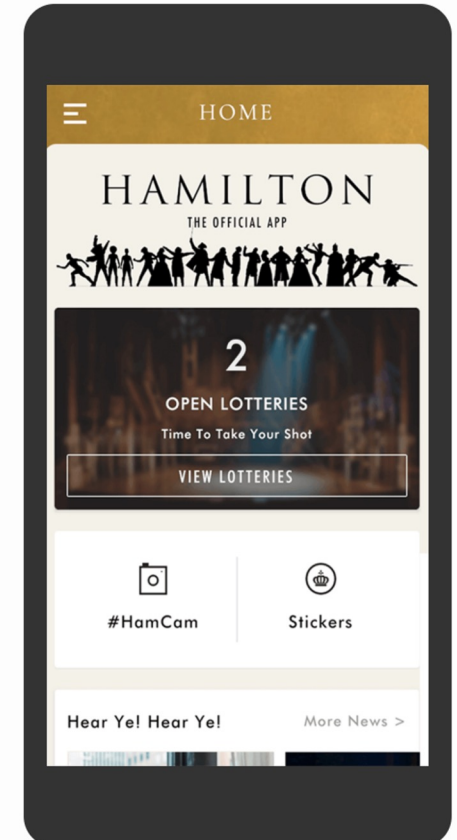
The Google AdWords app helps you keep your ad campaigns running smoothly – no matter where your business takes you.

## Birch Finance



Credit card rewards app to manage and optimize your existing cards.

## Hamilton Musical

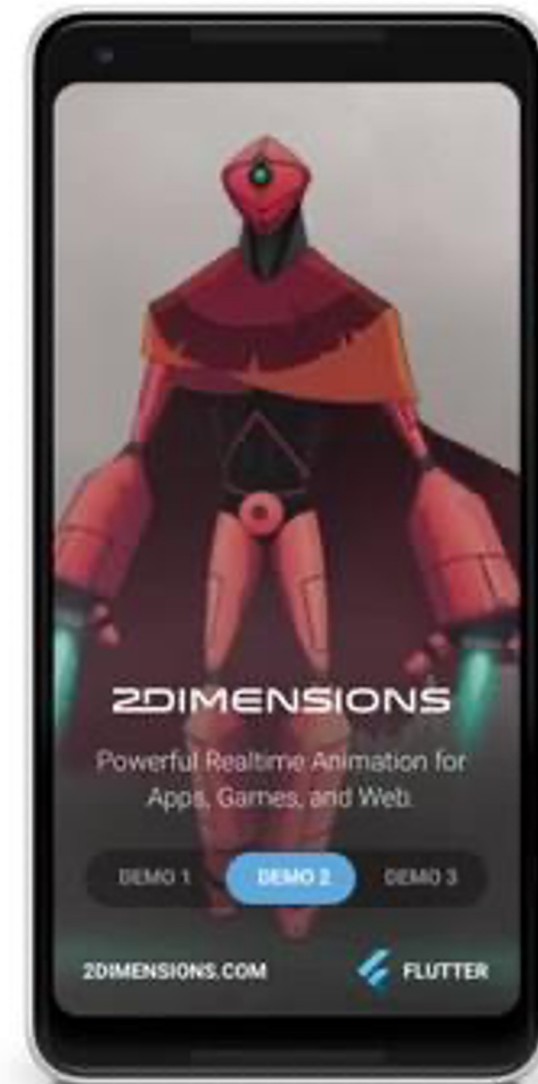


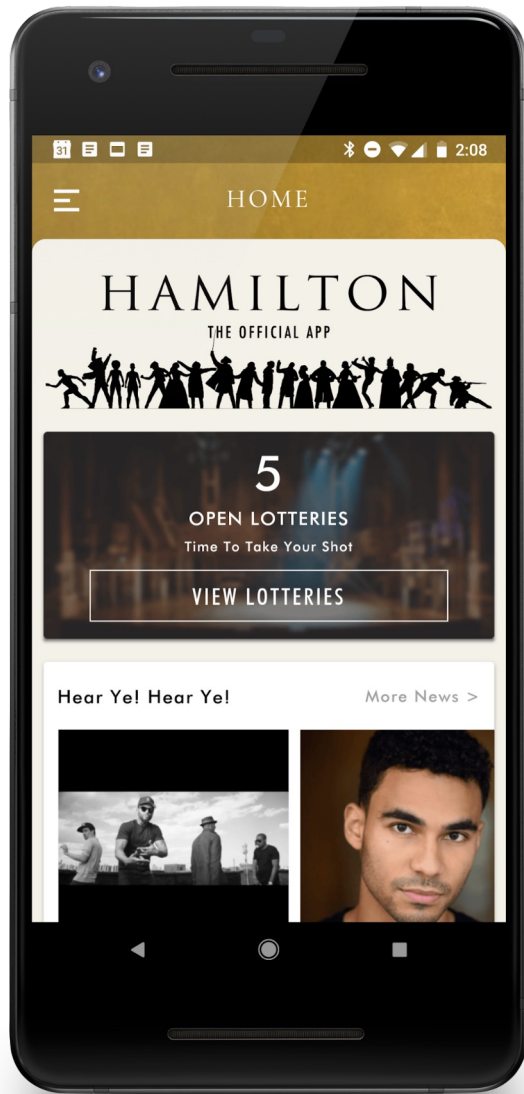
Official app of the hit Broadway musical, Hamilton. Includes daily lotteries, exclusive news and videos, a trivia game, merchandise store, and more.

# Graphic Horsepower

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Flutter seamlessly combines user interface widgets with 60fps animated graphics generated in real time, with the same code running on iOS and Android





“Hamilton launched as a *featured* app on iOS and Android **within three months of us writing our first line of Flutter code.**”

David DeRemer  
Co-Founder, Posse

# Works with popular tools and platforms

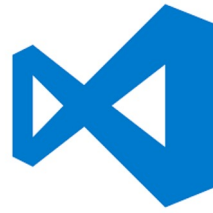
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Android Studio



Xcode



VS Code



Firebase



Android APIs



iOS APIs



Material Design



Redux



# Rich ecosystem and community

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- 1,100+ other packages in repository
- 24,000+ Github stars
- 500+ apps in Play Store
- [startflutter.com](https://startflutter.com), [flutter.rocks](https://flutter.rocks), [flutter.institute](https://flutter.institute), and more
- Open source (250+ contributors), BSD license



# Four ways to use Flutter today

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## Start a new app from scratch

Build your new idea in Flutter, and reach both iOS and Android at the same time.

## Prototype a new app idea

Use Flutter to test out an app concept or idea in record time.

## Bring your app to the the *other* platform

You already have an iOS or Android app? Use Flutter to build for the other platform. Combine codebases when you've proven your Flutter app.

## Use Flutter for a part of your app

Test Flutter in production with one or two screens in your existing app.





# Key component of the Google Developer family

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Flutter offers a portable, high-quality UI toolkit, and a fast, expressive way to build native app UIs.



# Flutter and More

- Recent Flutter Updates:  
[What's New in Flutter Docs?](#)  
[What's New with Flutter 3?](#)
- Continual Flutter Learnings:  
[Codelabs & Workshops](#)  
[Flutter Video Series](#)  
[Flutter Documentation](#)

- Use Cases:  
[Nubank](#)  
[BMW](#)  
[Abbey Road Studios](#)



# Thank you!

[flutter.dev](https://flutter.dev)