



FLUTTER 101





Bonacina Alberto

@polilluminato



By day...

- Software Engineer
- Backend Developer
- Flutter Developer



By night...

- Flutter enthusiast
- Free Software activist
- Linux User

e voi? 🤔



Facciamo il punto

Mobile	Applicazione	Multipiattaforma
Classe/Tipo	Widget	Hot Reload
Dart	API	Responsive/Adaptive
Open Source	Libreria	Package



Framework open source di Google per la creazione di
applicazioni multiplatforma compilate in modo nativo da
un'unica base di codice



App - Web App - Software - Applicazione

- **App**: qualsiasi software progettato per essere eseguito su un **dispositivo mobile**
- **Web App**: applicazione con cui si interagisce tramite un **browser** web
- **Software**: programma o insieme di programmi progettati per svolgere una funzione o un insieme di funzioni specifiche
- **Applicazione**: sinonimo di app, software, programma progettato per svolgere funzioni specifiche su vari dispositivi e piattaforme

🤔 Quali piattaforme?

mobile



web



desktop





Challenge sviluppo multiplatforma

- Molteplici team/sviluppatori
- Molteplici linguaggi di programmazione
- Implementazione/allineamento funzionalità
- Molteplici stili nella UI
- Manutenzione per piattaforma
- Risoluzione bug
- Assistenza

□ Vantaggi con Flutter

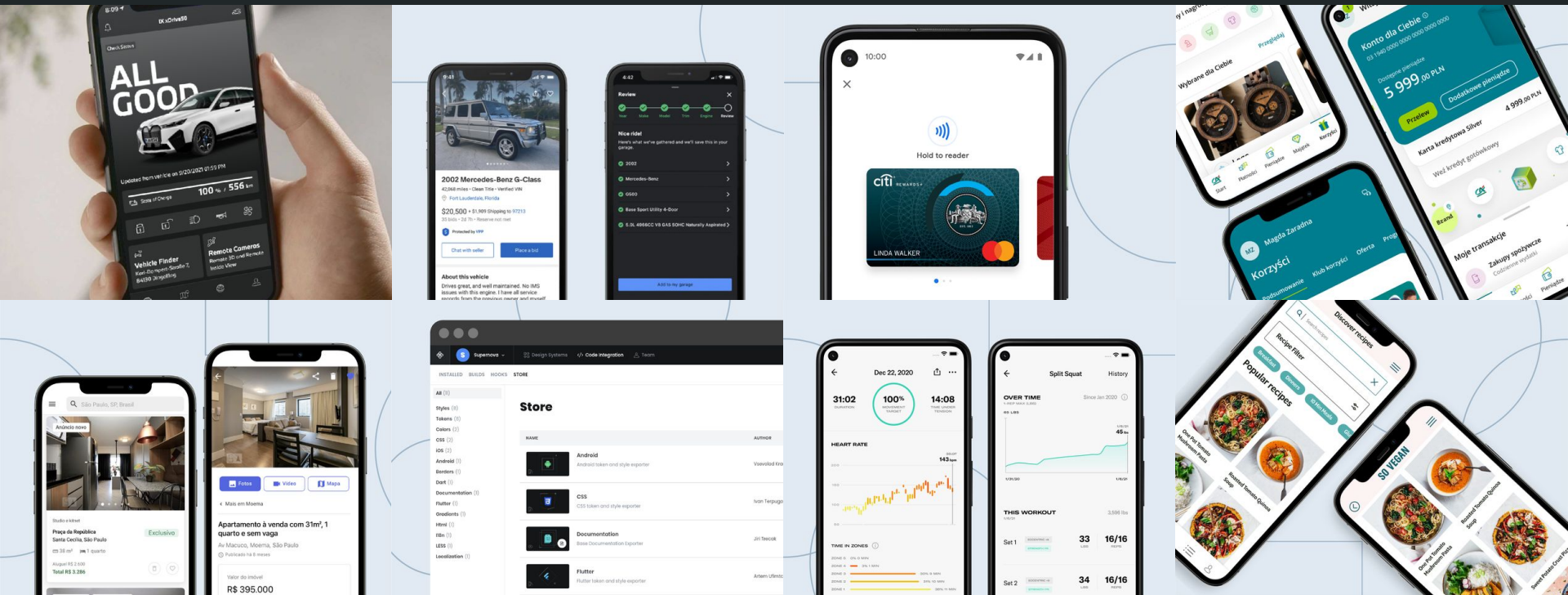
- Unica base di codice scritta in Dart
- Compilazione nativa sulle piattaforme supportate
- UI consistente e feature parity
- Maggiore velocità nello sviluppo di nuove funzionalità
- Diminuzione tempi di sviluppo
- Assistenza e bugfix più rapidi

Piattaforme di sviluppo e target

Sviluppo\Target	Android	iOS	Web	Windows	macOS	Linux
macOS	✓	✓	✓	✗	✓	✗
Windows	✓	✗	✓	✓	✗	✗
Linux	✓	✗	✓	✗	✗	✓

😄 Chi lo usa?

BMW, Google Pay, Alibaba, eBay, Toyota...

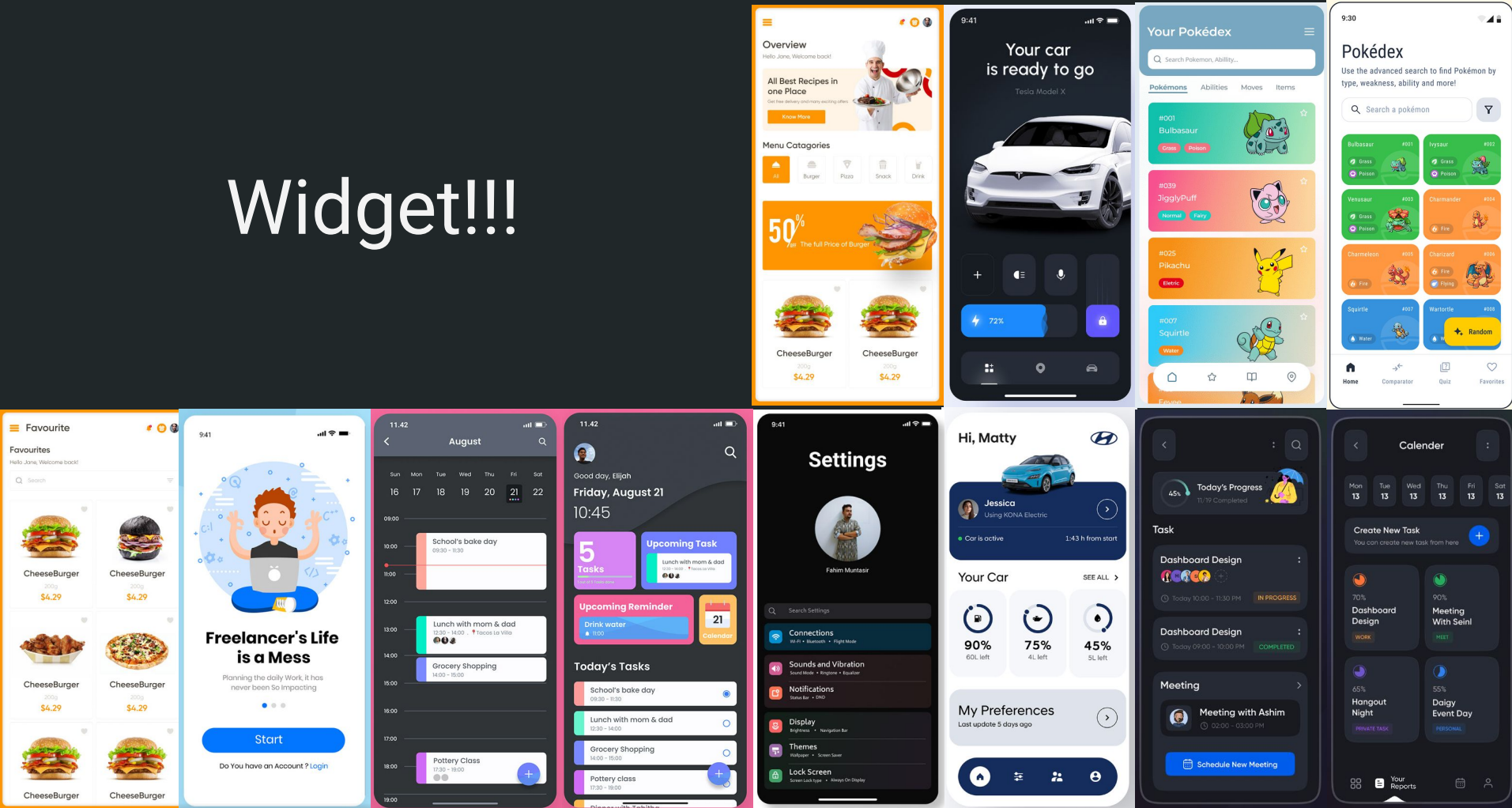


Parole chiave: **Widget**

- Tutto è un widget
- Componibili
- Estendibili
- Più di 215 widget



Widget!!!



Parole chiave: **Hot Reload** 



Parole chiave: Dart 🧐

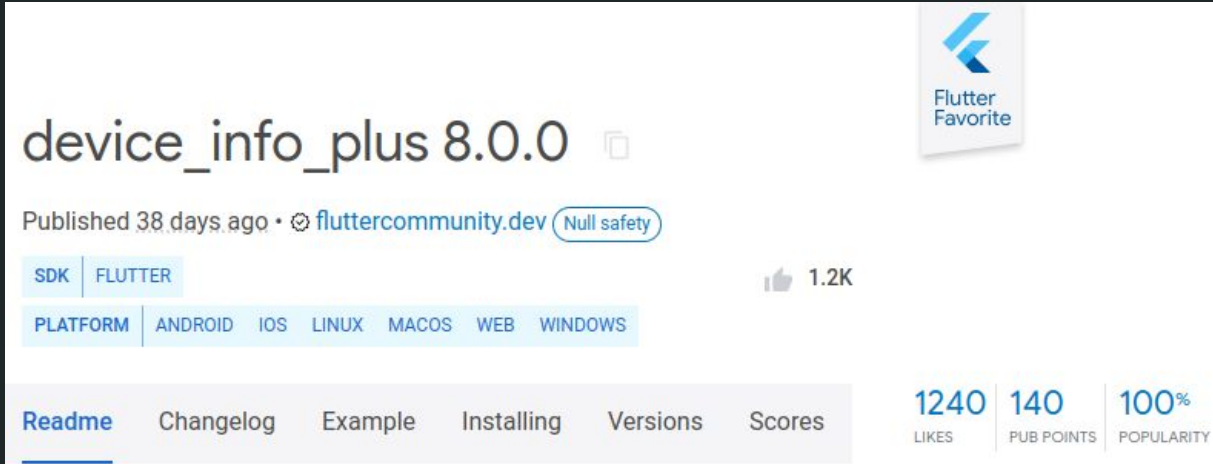
- Linguaggio tipizzato ad oggetti
- Compila per ARM, x64 e JavaScript
- Ereditarietà, Interfacce, Abstract, Mixins
- Null Safe
- Async-Await

```
class Animal {  
  
    String name;  
    int legs;  
    bool canFly;  
  
    Animal({required this.name,  
           required this.legs,  
           this.canFly = false});  
}
```

```
void main() {  
  
    List<Animal> animals = [  
        Animal(name: "Lion", legs: 4),  
        Animal(name: "Penguin", legs: 2),  
        Animal(name: "Eagle", legs: 2, canFly: true),  
    ];  
  
    for (Animal animal in animals) {  
        print('I\'m a ${animal.name}, ' +  
              'I\'ve got ${animal.legs} legs' +  
              ' and I ${animal.canFly ? "can" : "cannot"} fly');  
    }  
}
```

Parole chiave: **Package**

- Estendere le funzionalità
- Pub.dev
- Flutter Favourite
- Piattaforme supportate



The screenshot shows the Flutter package page for `device_info_plus` version `8.0.0`. The page is titled "device_info_plus 8.0.0" and includes a "Flutter Favorite" badge. It indicates the package was published 38 days ago by `fluttercommunity.dev` with a "Null safety" label. The package is categorized under "SDK" and "FLUTTER". It lists supported platforms: ANDROID, IOS, LINUX, MACOS, WEB, and WINDOWS. The page also shows a "Readme" tab, a "Changelog" link, and an "Example" link. At the bottom, there are statistics: 1240 Likes, 140 Pub Points, and 100% Popularity.

device_info_plus 8.0.0

Published 38 days ago • fluttercommunity.dev (Null safety)

SDK | FLUTTER

1.2K

PLATFORM | ANDROID | IOS | LINUX | MACOS | WEB | WINDOWS

Readme | Changelog | Example | Installing | Versions | Scores

1240 LIKES | 140 PUB POINTS | 100% POPULARITY

Parole chiave: Documentazione

- Getting Started, Layouts, Animazioni, Navigazione e Routing
- Catalogo Widget
- Deployment e Pubblicazione Store
- DartPad

Flutter documentation

Get started

Set up your environment and start building.

Widgets catalog

Dip into the rich set of Flutter widgets available in the SDK.

API docs

Bookmark the API reference docs for the Flutter framework.

Cookbook

Browse the cookbook for many easy Flutter recipes.

Samples

Check out the Flutter examples.

Videos

View the many videos on the Flutter YouTube channel.

Dart documentation

Welcome to the Dart documentation! For a list of changes to this site—new pages, new guidelines, and more—see the [What's new page](#).

Here are some of this site's most visited pages:

Language samples

A brief, example-based introduction to the Dart language.

Language tour

A more thorough (yet still example-based) introduction to the Dart language.

Effective Dart

Best practices for building consistent, maintainable, efficient Dart code.

Library tour

An example-based introduction to the major features in the Dart SDK's core libraries.

Dart SDK

What's in the SDK, and how to install it.

Futures, async, await

How to write asynchronous Dart code that uses futures and the `async` and `await` keywords.

Parole chiave: **IDE** 



Visual Studio Code



Android Studio



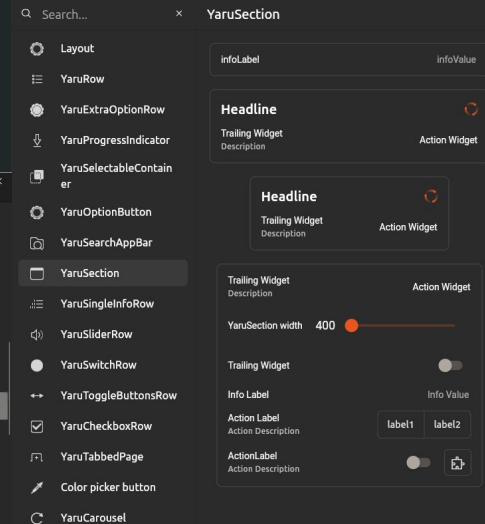
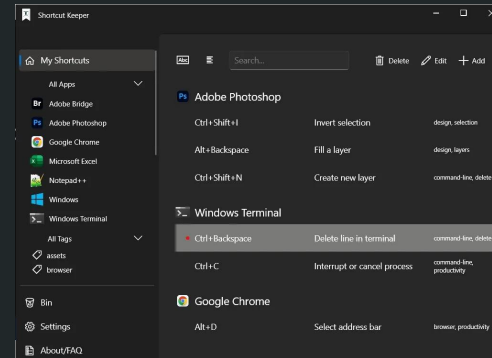
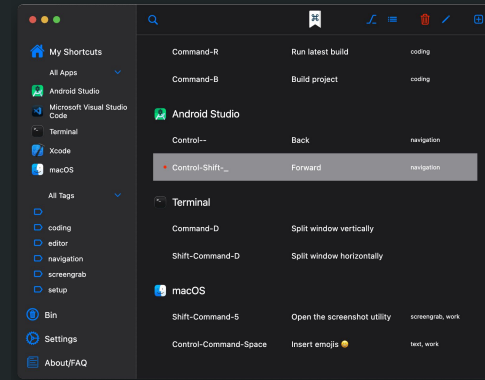
IntelliJ IDEA



Editor + Terminale

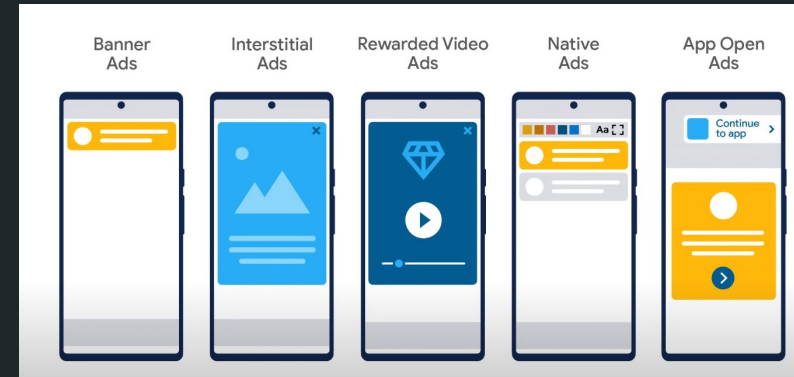
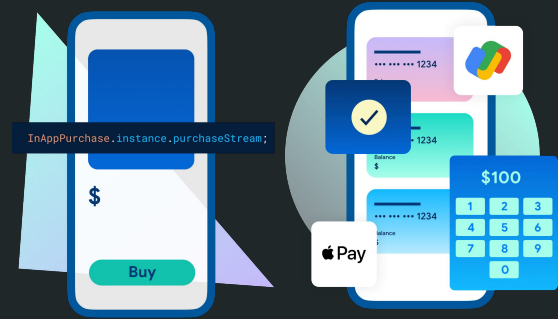
Parole chiave: **Adaptive e Responsive** 🦄

- Adaptive: adattarsi allo stile e alle aspettative degli utenti di una piattaforma specifica
- Responsive: la disposizione degli elementi cambia in base alle dimensioni o all'orientamento dello schermo



Parole chiave: **Monetizzazione** 💰

- Google Mobile Ads e Ad Manager
- Banner, interstitial, native e rewarded Ads
- In-app purchase
- Google and Apple Pay
- Stripe & RevenueCat





Stop talking!
Show me the code

Domande?



albertobonacina.com



linkedin.com/in/bonacinaalberto/



bonacina.alberto@gmail.com



[@polilluminato](https://twitter.com/polilluminato)



[@polilluminato](https://github.com/polilluminato)



[@polilluminato@fluttercommunity.social](https://fluttercommunity.social/@polilluminato)