Version 1.0

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# **Beginner (1.5 months)**

* Basic Dart
  + Introduce to Dart
  + Data types and operators in Dart
  + Control structure and loop
  + String/List handling and Collections in Dart
  + Class and Object Dart
  + Inheritance in Dart
  + Special classes in Dart
  + Future, Async/Await in Dart
  + Stream in Dart
* Debugging
* Git
* Application Configurations
* Flutter Architecture Platform
* Flutter Lifecycle
* Layout Design Principles
* Basic Layout Design with Widget
  + Text
  + TextField
  + Button
  + Image
  + Container
  + Column
  + Row
* **Final App**

# **Specialist (1.5 months)**

* Layout Design with Widget
  + Radio
  + Checkbox
  + ListView
  + GridView
  + Styling
  + Scaffold
* Navigations
* State, Stateless Widget & Statefull Widget, State Management with setState/ Bloc
* Permissions
  + Camera
  + Storage (photos, media, files)
  + Calendar
  + SMS
  + Phone
  + Contacts
  + Location
* Shared Preferences
* Encode/Decode
* APIs, Networking with Http/ Dio
* SQLite
  + Database
  + DAO
* Realtime database with Firebase
* Notifications
  + Notification messages
  + Data messages
* Animations
* Unit Testing
* Final App

# **Expert (3 months)**

* Programming Principles Kotlin
  + DRY
  + KISS
  + COI
  + YAGNI
  + SOLID
    - Single Responsibility Principle
    - Open/Closed Principle
    - Liskov Substitution Principle
    - Interface Segregation Principle
    - Dependency Inversion Principle
* Design Patterns
  + Singleton
  + Factory Method
  + Abstract Factory
  + Builder
  + Bridge
  + Observer
  + Facade
  + Prototype
* Dependency Injection with GetIt
* Reactive programming with RxDart
* Isolate
* Flutter in Native
  + Add Flutter to Android
  + Add Flutter to iOS
  + Write native module
* Memory Leak Management
  + How to detect leak memory
  + How to fix leak memory
  + Best practices
* MVVM
  + Model
  + View
  + View Model
* Clean Architecture
  + Presentation layer
  + Domain layer
  + Data layer
* **Final App**