# **App Development Roadmap with Timeline**

#### Phase 1: Fundamentals (1-2 Months)

- Learn Programming Language (Java/Kotlin for Android, Swift for iOS, Dart for Flutter, JS + React Native)
- Understand OOP concepts
- Master basic data structures and algorithms
- Learn Git and version control

### Phase 2: Platform & Development Tools (2-3 Months)

- Setup development environment (Android Studio, Xcode, Visual Studio Code)
- Learn about platform architecture
- Understand UI/UX principles
- Explore IDE features and debugging tools

#### Phase 3: Hands-on Development (3-4 Months)

- Build simple applications
- Integrate RESTful APIs
- Implement state management (Redux, Provider, Bloc, etc.)
- Work with databases (SQLite, Firebase, Realm)

## Phase 4: Advanced Topics (2-3 Months)

- Implement advanced UI/UX animations
- Explore testing frameworks (Unit Testing, Integration Testing)
- Integrate third-party services (payment gateway, analytics)
- Publish app to Play Store / App Store

## **Continuous Learning & Maintenance**

- Stay updated with latest trends and updates
- Participate in open-source projects
- Refactor and maintain existing apps
- Learn advanced architecture patterns (MVVM, Clean Architecture)