Purna Kalyan Shakya

Senior Flutter Engineer
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Summary

Senior Flutter Engineer with 5 years building production mobile applications. Focus areas include real-time systems, offline-first architectures, native Android integrations, and mobile performance. Maintainer of multiple open-source packages.

Technical Skills

Languages & Frameworks	Flutter, Dart, Kotlin, Python
Architecture	Feature-First Clean Architecture, MVVM, BLoC, Riverpod
Technologies & Tools	Socket.IO, MQTT, Android SDK, Dart FFI, Git, Postman, Swagger

Professional Experience

Slash Plus Mar 2023 – Present
Senior Mobile Application Developer *Kathmandu, Nepal*

- Designed a real-time fleet tracking system supporting 1,500+ active devices, offloading Socket.IO network payload processing to a background isolate to prevent UI lag.
- Batched incoming GPS coordinates over 3-second windows and synchronized map marker interpolation animation durations to deliver smooth vehicle movement on the UI.
- Engineered an offline-first, GPS-triggered bus media player with playlist/asset caching, priority-queue playback, and native Android channels for RSA verification, cutting latency by 99% (15s to 150ms).
- Structured the core codebase using Feature-First Clean Architecture and Git submodules, enabling parallel team development across multiple client-branded applications.
- Integrated QR and card payments on 30+ Android POS terminals, designing an offline-first transaction queue with secure RSA-based background synchronization.
- Implemented an auto-selecting printer driver interface for Bluetooth, platform-native, and package-based printers, rendering receipts as byte images using a custom Canvas painter.
- Established standards and conventions for a digital signage app with a recursive rendering engine for remote updates, mentoring the team for independent delivery.

Dynamic Technosoft Nov 2022 – Mar 2023
Mobile Application Developer *Kathmandu, Nepal*

- Developed delivery tracking features, integrating Google Maps with socket-based coordinate streaming in real time.
- Applied layer-based Clean Architecture patterns while developing and migrating ERP HRM modules.

Anchor Digital Agency Sep 2021 – Nov 2022
Mobile & Backend Developer *Kathmandu, Nepal*

- Created responsive Flutter layouts for desktop and mobile, using adaptive boundaries for multi-resolution support.
- Built Django REST APIs and PostgreSQL schemas with serializers and migrations to sync state with the Flutter client.

Engineering Solutions for Nepal Jun 2019 – Jan 2021
Electronics Engineer *Kathmandu, Nepal*

- Programmed ESP8266/Raspberry Pi IoT firmware, implementing serial links for mobile device control via a Kivy companion app.

Selected Projects

- **animated_marker** (pub.dev): Animated map marker library for Google Maps Flutter featuring smooth position and scale interpolation.
- **scroll_texts_widget** (pub.dev): Efficient marquee text renderer utilizing a CustomPainter and custom Ticker to bypass widget layout cycles for long strings.
- **clean_feature_arch** (pub.dev): Developer CLI to automate feature scaffolding, static analysis rules, and architecture boundaries for Flutter projects.
- **isolate_runner_mixin** (pub.dev): Utility mixin for executing CPU-intensive workloads in background Dart isolates.

Education

Nepal Engineering College 2014 – 2019
B.E. Electronics and Communication Engineering *Bhaktapur, Nepal*