

Jiayuan Zha

Flutter Developer | Remote Contractor

Email: futameng@gmail.com | Location: Beijing, China (Remote) | Timezone: UTC+8, flexible overlap hours

Summary

Flutter Developer with 2.5+ years of cross-platform development experience building production apps across iOS, Android, macOS, Windows, and Linux. Specialized in high-performance Flutter + Rust FFI development with 12 FFI modules in production. Experienced in full product lifecycle from architecture design to app store deployment. Available as an international remote contractor (W-8BEN / B2B).

Work Experience

Cloud Museum Data Group Co., Ltd.

Flutter Developer

Dec 2024 - Oct 2025

- Led full-stack Flutter development for a B2C art authentication marketplace serving 10K+ DAU with 138K+ lines of Dart
- Designed ViewModel + Service + Repository three-layer architecture, driving technical selection and code review
- Engineered concurrent media upload pipeline (6 images + 1 video) with local compression (30% bandwidth reduction)
- Integrated dual payment systems (WeChat Pay + Alipay) with complete state machine, error recovery, and dual-callback handling
- Implemented 5-minute cache mechanism reducing API calls by 40%, improving UX on slow networks

Beijing ZeroOne Smart Technology

Flutter Developer

Sep 2023 - Dec 2024

- Developed cross-platform VPN proxy client supporting 5 platforms (iOS, Android, macOS, Windows, Linux)
- Designed unified Rust FFI architecture with 12 static-linked modules and C3 config pipeline (Generate → Validate → Apply)
- Implemented CuteCloud-inspired UI redesign with system tray integration and embedded Mihomo for Android
- Optimized latency testing achieving 50%+ improvement via semaphore throttling + connection pool reuse
- Built 73,000+ line multi-protocol parser supporting 20+ protocols with i18n (8 languages)

Technical Skills

Flutter & Cross-Platform

- Proficient in Dart language, deep understanding of Flutter rendering, Widget lifecycle, state management
- State management: GetX, Riverpod, Provider, BLoC, Redux
- 5-platform development: iOS, Android, macOS, Windows, Linux
- Flutter hybrid development, native Plugin and Platform Channel encapsulation

Native & High-Performance

- Android: Kotlin/Java, Jetpack, Gradle | iOS: Swift/Objective-C, Xcode
- Dart FFI + Rust interoperability, 12 production FFI modules
- Socket connection pooling, concurrency control, caching strategies
- Memory management, startup optimization, UI performance tuning

Architecture & Tools

- ViewModel + Service + Repository three-layer architecture
- Git, GitHub, CI/CD, Code Review practices
- Networking: Dio, HTTP, Retrofit, WebSocket
- Local storage: SQLite, SharedPreferences, GetStorage

Key Projects

BitVPN - Cross-Platform VPN Proxy Client

2023 - 2024 | Flutter 3.3+ | Dart 3.1+ | Rust FFI | Kotlin | Swift | C++ | iOS, Android, macOS, Windows, Linux (5 platforms)

Commercial cross-platform VPN proxy client integrating Mihomo proxy kernel. Supports VMess, VLESS, Trojan, Hysteria2, TuIC, AnyTLS and 20+ proxy protocols with smart node selection, C3 config pipeline, and CuteCloud-inspired modern UI.

Key Responsibilities

- FFI Architecture: Unified static-linked Rust FFI (bit_native) with 12 modules: system proxy, socket pool, network interface, process guard, port scanner, hostname, privilege, sysinfo, timer, mihomo socket, Windows registry. Universal Binary for macOS (arm64 + x86_64)
- Config Pipeline: C3 architecture (Generate → Validate → Apply) — EnhancePipeline merges user overrides via YAML, CoreConfigValidator validates schema, writes to disk (desktop) or applies draft (Android)
- UI Redesign: CuteCloud-inspired card-based home, map background with shield indicator, system tray with mode selection and proxy group menus, minimize-to-tray
- Platform VPN: Embedded Mihomo for Android (EmbeddedMihomo, no separate process), Desktop uses pure Dart mihomo lifecycle with zombie process prevention
- Performance: 36 concurrent latency testing (desktop) / 10 (mobile), semaphore throttling + connection pool reuse (32 connections), 50%+ improvement
- Protocol Engine: Self-developed 73K+ line parser supporting 20+ protocols. Hybrid state management (Provider + Riverpod). i18n for 8 languages

Technical Highlights

- Socket Connection Pool (32 connections, 4 rejection strategies)
 - Cache TTL=1500ms reducing API calls
 - AppImage/DMG/RAR cross-platform release packaging
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Cloud Museum - B2C Art Authentication Marketplace

Dec 2024 - Oct 2025 | Flutter 3.7.12 | GetX | Rust FFI | iOS, Android

Full-featured B2C art authentication marketplace with 10K+ DAU. Supports online/offline authentication, digital collection preservation, membership tiers, and payment transactions.

Key Responsibilities

- Architecture: Led full-stack Flutter development with ViewModel + Service + Repository pattern enabling clean separation of UI, business logic, and data access
- State Management: Built unified reactive system with GetX covering global state, business modules, routing, and dependency injection
- Media Pipeline: Concurrent upload (6 images + 1 video), local image compression (30% bandwidth savings), real-time progress feedback
- Payment Integration: WeChat Pay (App + URL Scheme) and Alipay (Universal Link + URL Scheme dual callback) with complete state machine handling timeout, cancellation, retry
- Cache & Performance: 5-minute intelligent cache with TTL invalidation reducing API calls by 40%, improving UX on unstable networks
- Rust FFI: Integrated via flutter_rust_bridge for performance-critical RSA encryption and digital signature verification
- Push Notifications: JPush-based system with alias management, message categorization, and Deep Link navigation to specific pages

Technical Highlights

- 138K+ lines of Dart code
- 30% bandwidth reduction via compression
- Dual payment with full state machine

Tech Stack

Cross-Platform	Flutter 3.x, Dart 3.x (iOS, Android, macOS, Windows, Linux)
State Management	GetX, Riverpod, Provider, BLoC, Redux
Native	Kotlin, Java, Swift, Objective-C
High-Performance	Rust FFI, Tokio Async Runtime, Socket Connection Pool
Networking	Dio, HTTP, Retrofit, WebSocket
Storage	SQLite, SharedPreferences, GetStorage
Build & CI	Gradle, Xcode, Cargo, Git, GitHub

Education

Hebei University | Bioinformatics | Bachelor's Degree | June 2023

Remote Work Readiness

- ✓ Experienced with distributed codebases and async collaboration workflows
- ✓ Strong written English communication for documentation and code reviews
- ✓ Self-managed with proven ability to deliver production-quality code independently
- ✓ Flexible schedule with overlap availability for US timezone standups
- ✓ Available as independent contractor: 1099 (ITIN in process) / W-8BEN, or through company entity (W-8BEN-E / B2B)