Rajesh Choudhary

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Mobile & Full-Stack Engineer · Flutter · Django
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Summary

Mobile and full-stack engineer at K12 Techno Services. Own **6 production apps** used by parents, teachers and school staff, with **170K+ installs** and **80K daily active users**. Created **BASE**, a JEE/NEET coaching platform, from scratch, and shipped **100+ app releases**.

Education

Indian Institute of Technology, Kanpur, B.Tech in Electrical Engineering *2021 – 2025*
CPI 7.0/10

Experience

App Developer, K12 Techno Services Pvt. Ltd. *Jun 2025 – Present, Bengaluru*

- Rebuilt **media upload pipelines** handling **100K+ uploads a day**. Uploads resume after a drop, and background workers prepare videos to **play instantly on any phone**. Upload incidents went from **30+ a day to zero**
- Engineered an **offline-first face recognition attendance system** handling **15K+ staff a day**, supporting **offline check-in** on weak or unreliable internet, with every check-in verified by the server on sync
- Fixed **out-of-memory crashes** by releasing leaked video players and decoding feed photos at screen size instead of full camera resolution. Reached **99.8% crash-free users** and a **0.23% ANR rate**, under half the Google Play limit
- Shipped **live classes** with **real-time chat**, designed for **50,000 concurrent users**. Everyone sees a **live viewer count**, attendance tracks **how long each student watched**, and each class becomes a **recording with chat replay**
- Designed **offline-first online exams**. Every answer saves on the phone and syncs in the background, so a network drop or app crash loses nothing. Students can **switch devices mid-exam** safely, and the server **auto-submits** when time runs out. Sync handles **1,000+ requests per second with zero failures**
- Added **push notifications for 50K daily users**, with class reminders before every live class, announcements and an in-app inbox with unread counts
- Developed **live bus tracking**. Parents see the school bus on a map in **real time** and get an **arrival alert** with a road-based ETA as it nears the stop
- Developed a **B2B white-label school LMS app** themed per school, covering attendance, homework and fees
- Added a **custom network stack** so the app connects on Android 8 and 9 **interactive panels**, whose built-in TLS lacked the cipher suites our servers required
- Delivered the **order management system** sales staff use on the phone, covering customers, multistep orders, payments, deliveries, approvals and e-signed contracts, with access set by role and zone
- Wrote **end-to-end load tests** for the API, class joins, chat and file storage. The tests caught **capacity bottlenecks** that single-service tests missed, and proved that scaling up before a class raises join capacity by **50%**
- Launched an **AI study assistant** in BASE. Students ask about a lecture, a PDF or any part of the screen and get answers in the app, with chat history and a usage limit per student
- Created a **question bank** with a review workflow, and **weekly and monthly tests** with student ranks and percentiles
- Manage **releases for the whole mobile team** through Codemagic, TestFlight and both app stores, **100+ releases** so far. Introduced **over-the-air updates**, so urgent fixes reach every user the same day
- Mentored 2 developers and reviewed 300+ teammate branches before merge

Projects

LumaCaption: AI video captions lumacaption.com React, Flutter, Supabase

- Launched an AI caption app for creators on web and Android, **with paying users**, that writes word-timed captions in **100+ languages and scripts** and renders the final video **on the device** up to 4K, so exports cost nothing to serve
- Self-hosted a **Hinglish speech model** on cloud GPUs. It costs **about 60% less** per minute than ElevenLabs
- Integrated **subscriptions and usage-based billing** with Razorpay

Blinzo: interest-based video chat blinzo.chat Next.js, WebRTC, Socket.IO

- Designed a **peer-to-peer WebRTC** architecture where video, chat and a two-player game go straight between browsers. The server matches people by **shared interests, age and gender** and sets up each call
- Deployed a self-hosted **TURN relay server**, so calls connect even on strict office and mobile networks. A stalled call restarts its connection or finds a new match, and survives a server drop
- Added **on-device moderation** that detects explicit video, blurs it instantly and bans repeat offenders

Technical Skills

Languages	Dart, TypeScript, JavaScript, Python
Mobile	Flutter, React Native, Expo
Backend	Django REST Framework, Celery, PostgreSQL, Redis, Node.js, WebRTC, WebSocket
Release & Quality	Codemagic, Shorebird, TestFlight, App Store and Play Store releases