

YASH KUMAR SAIN

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EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2023 <sup>†</sup>	MTech (Dual Degree 5Y) <sup>†</sup>	IIT Kharagpur	7.89/10
2023 <sup>†</sup>	BTech (Dual Degree 5Y) <sup>†</sup>	IIT Kharagpur	7.89/10

EXPERIENCE	
Frontend Tech Lead, Hiccup Dating App	Feb'25 – Oct'25
<ul style="list-style-type: none"><li>Architected production-grade cross-platform app using Flutter, gRPC, and protobuf with fully async, event-driven communication</li><li>Implemented robust auth system with refresh tokens, persistent sessions, offline local caching, and seamless recovery across app lifecycle and network transitions</li><li>Integrated Riverpod-based global state management ensuring SOLID compliance, clean architecture, and scalable async feature integration</li><li>Maintained &gt;90% crash-free rate with Firebase Crashlytics, performance monitoring, and 23 custom analytics events</li><li>Designed full post creation and upload system with background compression, retry-backed Dio queueing, and intelligent network-aware state handling</li><li>Built bidirectional encrypted chat via gRPC streams with live delivery/read receipts and offline synchronization</li><li>Engineered TikTok-style discovery feed with optimized batch querying, lazy media loading, and swipe-to-profile transitions</li><li>Implemented proposal and gift catalog feature with Razorpay payments and efficient data reuse across tabs to minimize redundant queries</li><li>Enabled unified profile editing with optimistic updates and single-call synchronization of all user attributes</li><li>Ensured GDPR and CCPA compliance for secure data handling, consent tracking, and analytics privacy standards</li></ul>	
Software Engineer, Optym	Jul'23- Feb'25
Project 1 – WheelsUp Flights Scheduling	
<ul style="list-style-type: none"><li>Analyzed and optimized PySQL queries in PostgreSQL database to reduce redundant multi-endpoint calls and improve query efficiency for faster response time</li><li>Designed complete Entity Relationship Diagram (ERD) for documentation and knowledge transfer of database structure</li><li>Resolved multiple production bugs across PostgreSQL database, Python backend, and PySQL query layer ensuring consistent data accuracy and backend reliability</li></ul>	
Project 2 – GateAI   Southwest Airlines	
<ul style="list-style-type: none"><li>Built and maintained backend services to manage aircraft gate assignments optimizing for minimum gate cost, minimum passenger and crew transfer time, and gate prioritization among owned, shared, and airport gates</li><li>Designed scalable database schema and APIs using Node.js and TypeScript for event-driven architecture processing ~1M flight events per airport daily</li><li>Integrated AWS Lambda, EventBridge, RDS (PostgreSQL), SQS, SNS, and SES to handle asynchronous workflows, notifications, and fault-tolerant data ingestion</li><li>Developed event models for Southwest Airlines' flight, crew, and commodity streams performing real-time data transformation aligned with internal DB schema for optimal processing</li><li>Implemented complex algorithms for connecting passengers, crew, and commodities including transit time calculations and flight connection validations based on ETA and ETD buffers</li><li>Refactored major modules to adopt CQRS pattern, SOLID principles, and functional programming improving system maintainability and performance</li><li>Engineered efficient API layer for optimized data retrieval and restructuring enabling Gate Optimization Engine to produce near real-time scheduling insights for client dashboard</li><li>Contributed to architecture decisions and bug resolutions saving millions in operational costs and received performance bonus of ₹6 L INR for exceptional work</li></ul>	

SKILLS		
Flutter (Production-Grade Architecture)	gRPC & Protocol Buffers	Clean Architecture & SOLID Principles
Riverpod State Management	Cross-Platform App Development (iOS & Android)	Backend Integration (Node.js, AWS Lambda, PostgreSQL)
Async Event-Driven Systems	Authentication & Secure Session Management	Payment Gateway Integration (Razorpay, Stripe)
Realtime Chat & Messaging Systems	App Performance & Crash Monitoring (Firebase Suite)	Data Privacy & Compliance (GDPR, CCPA)
UI/UX & Responsive Animations (Material, Cupertino, Glassmorphism)	API Design & Data Modeling	Database Architecture & Query Optimization

<sup>†</sup> - Completed a 5-year Dual Degree program at IIT Kharagpur, earning both B.Tech and M.Tech degrees upon graduation in 2023