

YASH KUMAR SAIN

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EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2023 ¹	MTech (D al Deg ee 5Y) ¹	IIT Kha agp	7.89/10
2023 ¹	BTech (D al Deg ee 5Y) ¹	IIT Kha agp	7.89/10

EXPERIENCE	
Frontend Tech Lead, Hiccup Dating App	Feb'25 – Oct'25
<p>Achieved production-grade code - platform app using Flutter, gRPC, and protobuf in frontend communication. Implemented robust authentication, permissions, offline local caching, and seamless eco-eco app lifecycle and notification.</p> <p>Implemented Redis-based global state management using SOLID compliance, clean architecture, and scalable analytics in integration. Maintained >90% cache efficiency in Firebase Cloud Firestore, performance monitoring, and 23 critical issues.</p> <p>Designed full platform and loaded server-side backend components, event-driven Datalog engine, and intelligent notification handling. Built bidirectional encrypted chat using gRPC stream and reliable delivery / read receipt and offline synchronization.</p> <p>Engineered TikTok-like video feed with optimized batch queuing, lazy media loading, and live-streaming pipeline.</p> <p>Implemented push notification and geolocation features using React Native and efficient data processing and optimization.</p> <p>Enabled unified profile editing with optimistic updates and single-call synchronization of all state.</p> <p>Enforced GDPR and CCPA compliance for data handling, consent tracking, and analytics privacy.</p>	
Software Engineer, Optym	Jul'23- Feb'25
Project 1 – WheelsUp Flights Scheduling	
<p>Analyzed and optimized PostgreSQL queries in PostgreSQL database to reduce end-to-end latency and improve query efficiency for fare estimation.</p> <p>Designed complex Entity-Relationship Diagram (ERD) for documentation and knowledge transfer of database schema.</p> <p>Resolved multiple production bugs across PostgreSQL database, Python backend, and PostgreSQL query layer ensuring consistent data accuracy and backend reliability.</p>	
Project 2 – GateAI Southwest Airlines	
<p>Built and maintained backend service to manage aircraft gate assignment optimization for minimizing gate costs, minimizing passenger and crew time, and gate proximity among others, handled, and airport gate.</p> <p>Designed scalable database schema and API using Node.js and TypeScript for end-to-end architecture processing 1M flight information per day.</p> <p>Integrated AWS Lambda, EventBridge, RDS (PostgreSQL), SQS, SNS, and SES to handle asynchronous workflow, notification, and email automation.</p> <p>Developed end-to-end solution for Southwest Airlines flight, crew, and commodity team performance evaluation aligned with internal DB schema for optimal processing.</p> <p>Implemented complex algorithms for connecting passengers, crew, and commodity including itinerary calculation and flight connection validation based on ETA and ETD buffer.</p> <p>Refactored major module to adopt CQRS pattern, SOLID principles, and functional programming improving maintainability and performance.</p> <p>Engineered efficient API layer for optimized data delivery and caching enabling Gate Optimization Engine to process near-real-time scheduling in high-volume client dashboard.</p> <p>Contributed to architecture decision and budget estimation saving millions in operational costs and achieved performance bonus of 6 L INR for exceptional work.</p>	

SKILLS		
Flutter (Production-Grade Architecture)	gRPC & Protocol Buffers	Clean Architecture & SOLID Principles
Redis State Management	Code-Platform App Development (iOS & Android)	Backend Integration (Node.js, AWS Lambda, PostgreSQL)
Advanced Event-Driven System	Authentication & Session Management	Payment Gateway Integration (Razorpay, Stripe)
Real-time Chat & Messaging System	App Performance & Cache Monitoring (Firebase, Sentry)	Data Privacy & Compliance (GDPR, CCPA)
UI/UX & Responsive Animation (Material, Cupertino, Glassmorphism)	API Design & Data Modeling	Database Architecture & Query Optimization

¹ - Completed a 5-year Dual Degree program at IIT Kharagpur, earning both B.Tech and M.Tech degrees upon graduation in 2023