

YASH KUMAR SAIN

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2023'	MTech (Dual Degree 5Y)	IIT Kharagpur	7.89/10
2023'	BTech (Dual Degree 5Y)	IIT Kharagpur	7.89/10

EXPERIENCE

Frontend Tech Lead, Hiccup Dating App

Feb'25 – Oct'25

Achieved production-ready code for mobile app using Flutter, gRPC, and progressive hybrid architecture, enabling communication, implementation of offline local caching, and example ecosystem app lifecycle handling, and network optimization.

Designed global architecture management, ensuring SOLID compliance, clean architecture, and testable architecture design.

Mainained >90% coverage for unit tests, performance monitoring, and 23 common architectural design patterns.

Developed full stack and p2p communication layer using gRPC, REST API, and GraphQL, implementing efficient handling of real-time data feeds and offline synchronization.

Engineered TikTok-like video feed implementation, media loading, and file download handling.

Implemented operational monitoring and efficiency analysis for various components.

Enabled file editing, download, and single-call synchronization of all features.

Ensured GDPR and CCPA compliance for data handling, tracking, and analytical processing.

Software Engineer, Optym

Jul'23- Feb'25

Project 1 – WheelsUp Flights Scheduling

Analyzed and optimized PostgreSQL queries for flight scheduling, using eSQL and PL/pgSQL to handle complex logic and ensure efficient execution.

Designed and implemented a relational database diagram (ERD) for documenting schema and knowledge management, using Node.js and TypeScript for API development.

Developed multiple production-ready PostgreSQL databases, PL/pgSQL triggers, and stored procedures for handling data consistency and reliability.

Project 2 – GateAI | Southwest Airlines

Built and maintained backend infrastructure to manage aircraft assignments, optimizing for minimum downtime, minimum manpower, and efficiency, and ga

imed, and gauge productivity among operators, handling, and aircraft maintenance.

Designed database schema and API using Node.js and TypeScript, implementing 1M flight enqueueing per day.

Integrated AWS Lambda, EventBridge, RDS (PostgreSQL), SQS, SNS, and SES to handle notifications and scheduled tasks.

Developed a real-time model for Southwest Airlines flight scheduling, using PostgreSQL and Node.js to handle complex calculations and synchronization.

Implemented complex algorithms for connecting passenger segments, commodity inclusion, and flight connection validation based on ETA and ETD.

Refactored major modules to adopt CQRS pattern, SOLID principles, and functional programming, improving maintainability and performance.

Engineered efficient API layers for operational data exchange and enabling Gate Optimization Engine to process near-real-time scheduling in high-fidelity client applications.

Contributed to achieving operational efficiency and cost reduction by 10 million operational costs and received performance bonus of 6 L INR for exceptional work.

SKILLS

Flutter (Production-Grade Architecture)	gRPC & Protocol Buffers	Clean Architecture & SOLID Principles
Requirements Management	Cross-Platform Application Development (iOS & Android)	Backend Integration (Node.js, AWS Lambda, PostgreSQL)
Architecture Design	Architecture & System Design Management	Performance Gauges & Logging
Real-time Charging System	App Performance & Cache Monitoring (Firebase, SQLite)	Data Privacy & Compliance (GDPR, CCPA)
UI/UX & Responsive Animation (Material, Glide, Glide)	API Design & Data Modeling	Database Architecture & Optimization