

SUMAN KUMAR KHAN

Full Stack Software Engineer | React.js | Next.js
Node.js | React Native | WebRTC
GCP | AI-Enabled Development

3+ Years
Experience

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Profile Summary

Full Stack Software Engineer with **3+** years of experience building scalable web, mobile, real-time communication, and API-driven applications across SaaS, HRM, AR/VR, healthcare, and live production technology. Strong expertise in React.js, Next.js, TypeScript, JavaScript, Node.js, React Native, WebRTC, Mediasoup, Socket.IO, Python FastAPI, and GCP.

Experienced in designing and developing real-time platforms, modernizing legacy frontend architectures, building reusable UI components, developing REST APIs, integrating cloud services, and implementing CI/CD workflows. Hands-on exposure to AI-powered application development, MediaPipe, active-speaker detection, AI development tools, and Generative AI technologies.

Proven ability to work across the complete software development lifecycle, including requirements understanding, architecture, development, API integration, testing, performance optimization, code reviews, deployment, and production support.

Key Contributions

- Delivered a **3**-workflow remote multi-camera live production platform within **10** months using Next.js and React Native.
- Enabled **4–6** participant WebRTC sessions using Mediasoup SFU and Socket.IO across **2** real-time pipelines.
- Built 6+ producer-studio capabilities covering feed switching, capture, overlays, LUT grading, and program output.
- Delivered 4K ISO recording with native mobile modules and resilient GCS uploads, improving recording reliability by 70%.
- Implemented AI-powered camera switching across **2** platforms using MediaPipe lip detection and active-speaker detection.
- Reduced integration complexity by **22%** across Firebase, Stripe, and SendGrid through Next.js Backend-for-Frontend APIs.
- Integrated **3** FastAPI workflows with Pub/Sub, Cloud Run video processing, and Jenkins CI/CD on GCP.
- Resolved **90%** of API Builder bugs, contributing to improved application stability and performance.
- Led the modernization of a Backbone.js-based API Builder toward React.js micro frontend architecture using Web Components.
- Delivered **5+** product enhancements across stage duplication, component copy-paste, actions, rules, and automation.
- Built **3** HRM modules covering user management, leave management, and payroll with automated notifications.
- Conducted **12+** React.js technical interviews to support engineering hiring and talent evaluation.
- Secured 1st place in the Royal Enfield Clone Project at Masai School in August 2022.

Core Skills

Full Stack Development

React.js, Next.js, Node.js, TypeScript, JavaScript, REST APIs, Frontend Architecture, Backend Development

Frontend Engineering

React.js, React Native, Redux Toolkit, Zustand, Backbone.js, Marionette.js, Web Components, Webpack, Angular, HTML5, CSS3, Tailwind, Bootstrap

Real-Time & Media

WebRTC, Mediasoup SFU, Socket.IO, Real-Time Streaming, Active Speaker Detection, MediaPipe Face Landmarker, Web Audio API

Mobile Development

React Native, Expo, Kotlin, Native Mobile Modules, Deep Linking

Backend & APIs

Node.js, Python FastAPI, REST APIs, C#, .NET, MongoDB, Swagger, Postman, API Integration

Cloud & DevOps

GCP, Cloud Run, Google Cloud Storage, Pub/Sub, Secret Manager, Firebase, Jenkins CI/CD, Netlify

AI & Generative AI

MediaPipe, GitHub Copilot, Cursor, Claude, ChatGPT, Gemini, Google Antigravity, LangChain, Hugging Face, Generative AI

UI & Design

Ant Design, Chakra UI, Flowbite, Tailwind, SCSS, Figma, Chart.js, Vectary

Engineering Practices

SDLC, Requirement Gathering, System Architecture, Code Development, Code Review, PR Review, UI Testing, Performance Optimization, Agile, Scrum, CI/CD

Professional Experience

DIGITAL AVENUES, KOLKATA *Software Engineer*

May 2025 - Jul 2026

Project: Prisium - Remote Multi-Camera Live Production Platform

Technology Stack: Next.js 15, React 19, TypeScript, React Native, Expo, WebRTC, Mediasoup, Socket.IO, MediaPipe, Kotlin, Python FastAPI, GCP Cloud Run, Pub/Sub, GCS, Firebase, Stripe, Jenkins

Delivered a 3-workflow production platform within 10 months using Next.js and React Native.

- Enabled 4–6 participant WebRTC sessions using Mediasoup SFU and Socket.IO across 2 real-time communication pipelines.
- Developed 6+ producer-studio capabilities for feed switching, capture, overlays, LUT grading, and program output.
- Implemented 4K ISO recording using native mobile modules and resilient Google Cloud Storage uploads, improving recording reliability by 70%.
- Built AI-powered camera switching across 2 platforms using MediaPipe lip detection and active-speaker detection.
- Developed and shipped the React Native LiveShare application with 3+ capture capabilities for remote smartphone broadcasting through deep links.
- Reduced integration complexity by 22% across Firebase, Stripe, and SendGrid through Next.js Backend-for-Frontend APIs.
- Integrated 3 FastAPI workflows with Pub/Sub and Cloud Run-based video processing.
- Implemented Jenkins-based CI/CD workflows to support application delivery on GCP.
- Worked across frontend, backend, mobile, real-time communication, cloud infrastructure, and third-party integrations.

THYNK WEB, GURUGRAM *Associate Software Engineer*

May 2023 - Jan 2025

Project: App Studio - Platform Modernization & API Builder Development

Technology Stack: Backbone.js, React.js, Marionette.js, Underscore.js, jQuery, Web Components, Webpack, Ant Design, Sass, Figma

- Resolved 90% of API Builder bugs, improving application stability and performance.
- Led the migration from Backbone.js to React.js micro frontend architecture using Web Components.
- Optimized metadata and stage-setting logic to improve application performance and responsiveness.
- Delivered 5+ product enhancements covering stage duplication, component copy-paste, actions, rules, and automation.
- Built Figma-driven React.js components to improve UI consistency and integration with product designs.
- Debugged and enhanced legacy Backbone.js features while working across unfamiliar frameworks and codebases.
- Created comprehensive Confluence documentation to improve technical knowledge sharing within the team.

Project: HRM Software - Frontend & API Development

Technology Stack: React, TypeScript, Redux Toolkit, Flowbite, Chart.js, Axios, API Integration, C#, .NET

- Developed reusable React components for an employee management platform.
- Developed REST APIs supporting 3 data workflows covering import/export, batch processing, and employee synchronization.
- Built 3 HRM modules for user management, leave management, and payroll using TypeScript and Redux Toolkit.
- Implemented automated notifications across HRM workflows.
- Redesigned UI components to improve user experience and accessibility.
- Participated in PR reviews to maintain code quality and consistency.

Project: AR/VR Platform - Frontend Development & Product Visualization

Technology Stack: React, Vectary, API Integration, Bootstrap, Figma

- Developed 2 core screens, Catalog and Product Details, supporting publishing, 2D-to-3D digitalization, and AR/3D visualization.
- Added 4+ product management capabilities covering editing, share tracking, attributes, and descriptions.
- Integrated frontend components with APIs and visualization workflows.

Project: Healthcare Software - UI/UX Enhancement & System Optimization

Technology Stack: React, Bootstrap, Custom Client Components

- Enhanced user experience across 2 healthcare screens, My Intuitive and Da Vinci.
- Improved workflow usability through frontend enhancements and component-level optimization.
- Conducted 12+ React.js technical interviews to support engineering recruitment and technical evaluation.

THYNK WEB, GURUGRAM *Software Development Intern*

Feb 2023 - Apr 2023

Project: Real-Time Vehicle Tracking System

Technology Stack: Angular, Bootstrap, SCSS

- Developed a real-time vehicle tracking dashboard for fleet monitoring.
- Built 2+ analytics areas covering battery and fleet monitoring.

- Developed responsive frontend components for real-time operational visibility.

CAREER TRANSITION

Full Stack Development, MERN Training

Dec 2021 – Jan 2023

- Completed a self-funded transition into software development through full-time MERN training.
- Built practical knowledge across frontend development, backend development, APIs, databases, and modern web application development.

SS CLASSES, JHARKHAND *Private Tutor*

Jan 2017 - Nov 2021

- Tutored Class 6–10 students in Mathematics and Science through personalized instruction.
- Designed customized lesson plans aligned with individual learning styles and academic requirements.
- Supported students in improving conceptual understanding, problem-solving skills, and exam readiness.

Awards & Achievements

- 1st Place - Royal Enfield Clone Project, Masai School, August 2022
- Certificate of Appreciation - Assistant Councilor, Vidya Bharati Chinmaya Vidyalaya, March 2009
- Pabudan Certificate, Avantika Talent Search International Essay Competition, 2006
- Merit Certificate, Avantika Talent Search Greeting Card Competition, 2007
- Certificate, Bharatiya Sanskriti Gyan Pariksha, 2007

Certifications & Training

- Complete Generative AI Course with LangChain and Hugging Face - In Progress, Expected 2026
- Minor in Artificial Intelligence - IIT Ropar
- Full Stack Web Development, MERN - Masai School
- Ethical Hacking Training - Internshala

Education

- Minor in Artificial Intelligence - IIT Ropar **Aug - 2025**
 - Full Stack Web Development - MERN, Full-Time - Masai School **2023**
 - Diploma in Electrical Engineering - Al-Kabir Polytechnic **2016**
 - Higher Education / Technical Training
- (Additional technical training in software and application development as reflected in professional experience.)