Aman Anurag

📞 +91-7903463322 | ✉ amananurag.20@gmail.com | 🔗 LinkedIn | ⦿ GitHub | 🌐 Portfolio
New Delhi, Punjab, India

EDUCATION

CT University   Ludhiana, Punjab
Bachelor of Technology in Computer Science Engineering – CGPA: 8.67/10.0   *2020 – 2024*
- **Gold Medalist:** Highest CGPA in School of Engineering & Technology (CSE - AI)

TECHNICAL SKILLS

Desktop Development: Electron.js, IPC Communication, Context Isolation, Preload Scripts, Auto-Updater, Native Integrations
Languages & Frameworks: JavaScript, TypeScript, Python, React 19, Next.js, React Native, Node.js, Express.js, Fastify
Frontend Technologies: Redux, Zustand, Vite, Tailwind CSS, Material-UI, Bootstrap, Radix UI
Web3 Basics: Web3.js, Ethers.js, Wallet Integration, MetaMask, Smart Contract Interaction
Backend & Databases: MongoDB, PostgreSQL, Prisma, Redis, RabbitMQ, WebRTC, Socket.io, RESTful APIs
Cloud & DevOps: AWS (EC2, ECS, S3), Docker, Jenkins, CI/CD, Code Signing, App Notarization, Auto-Update Systems
Tools & Practices: Git, GitHub, Jira, Agile/Scrum, Linux, Windows/macOS Development, Version Control

PROFESSIONAL EXPERIENCE   3+ Years Experience

Full Stack Developer   July 2023 – Present
Klovertel Private Limited   *New Delhi, India*
- Architected full-stack **accommodation management system** using **MERN stack** with **React Native mobile app**, featuring **real-time booking**, room allocation, and **payment integration** serving **500+ daily users** with seamless cross-platform synchronization
- Developed comprehensive **driver management system** with **live GPS tracking**, route optimization algorithms, and **automated dispatch** using **Socket.io** for real-time updates and **MongoDB geospatial queries**, reducing response time by **40%** and improving fleet efficiency
- Built **Trace Venue desktop application** using **Electron.js** with **main/renderer process separation**, **IPC communication**, and **POS thermal printer integration**; implemented **offline-first architecture** with local database sync, achieving **99% uptime** without internet connectivity
- Implemented **role-based access control (RBAC)**, JWT authentication, and secure API endpoints handling **50,000+ API requests daily** with optimized database indexing and caching strategies
- Engineered **LeadNest CRM platform** using **React 19, Vite, and TailwindCSS** with lead pipeline management, **drag-and-drop form builder**, **role-based access control**, and **TanStack Table** for handling **10,000+ records** with Excel/PDF export and fuzzy search capabilities
- Integrated real-time features: **Twilio Voice SDK**, **WhatsApp messaging API**, **Firebase notifications**, **SignalR live updates**, **ApexCharts dashboards**, multi-language support (i18n), and **Sentry error monitoring** achieving **99.9% uptime**
- Built dynamic **product analytics dashboard** for Supra.tools using **Next.js** processing complex feature matrices with **interactive charts and data visualizations**, reducing analysis time by **40%** and enabling data-driven decisions
- Built cross-platform mobile application in **React Native** with **offline-first architecture**, local caching using **AsyncStorage**, and **push notifications** using Expo, achieving **95%+ user retention** and 4.5+ app store rating

Software Developer Intern   January 2023 – June 2023
Klovertel Private Limited   *New Delhi, India*
- Built **RESTful APIs** and React components for **QR-based restaurant management system**, automating order processing and improving operational efficiency by **30%** with real-time kitchen display integration
- Implemented **Redux store** for cart management with intelligent item aggregation - automatically incremented quantity for duplicate items and maintained cart persistence across page refreshes, reducing redundant API calls
- Utilized **MongoDB transactions** to ensure data consistency across orders, payments, and inventory updates; implemented automatic rollback mechanism on payment failures to maintain database integrity
- Optimized search functionality with **debouncing techniques** reducing API calls by **60%**; implemented **real-time updates via Socket.IO**, pagination, and email notifications using **Nodemailer**
- Integrated **Cloudinary** for image optimization and **CDN delivery** achieving **25% reduction** in system response time and improved page load performance

Key Projects

Virtual Focus Room (Web + Desktop + Mobile) | *React 19, Electron.js, React Native, WebRTC, Socket.io*
- Built full-stack **real-time virtual co-working app** with **P2P video/audio** using **WebRTC**, screen sharing, collaborative whiteboard, chat with file attachments, and **tiered permissions** (guest/free/premium) supporting **concurrent sessions**
- Implemented custom **Socket.io signaling server** and complete **WebRTC flow** (offer/answer/ICE candidates) with **STUN servers**; used **RTCRtpSender.replaceTrack** for seamless screen-share toggling without peer connection renegotiation
- Built **Electron.js desktop app** and **React Native mobile app** with feature parity across all platforms; designed responsive **VideoGrid component** with pinning, spotlight mode, and integrated productivity tools (**Pomodoro timers**, todos, ambient sounds)
- ↗ Live Web | ▶ Demo | ⊞ Desktop EXE | ◯ GitHub

Course Management System (Web + Desktop + Mobile) | *React, Electron.js, React Native, Node.js, MongoDB*
- Full-featured **Learning Management System** with enrollment system, structured video tutorials with **progress tracking**, MCQ quizzes with instant scoring, **coding problems** with Monaco Editor, **study reels** for quick learning, and **secure payment integration** using Razorpay/Stripe
- Built comprehensive **admin dashboard** for course management, content creation, student analytics, and enrollment tracking; implemented **Markdown-based note-taking** system with **PDF export functionality** and real-time quiz engine with performance analytics
- Built **Electron.js desktop app** with offline video playback and **React Native mobile app** for cross-platform access; executes coding exercises safely in **sandboxed Docker containers** via backend API
- ↗ Live Web | ▶ Demo | ⊞ Desktop EXE | ◯ GitHub

Code Execution Platform (LeetCode Clone) | *React, TypeScript, Node.js, Fastify, Redis, Docker, AWS* ◯ GitHub
- Architected **microservices-based platform** for code compilation and execution with **seamless scalability** and **high availability**; deployed on **AWS with auto-scaling** capabilities handling **concurrent submissions**
- Built sophisticated **Problem Admin Service** using JavaScript, Express, and MongoDB for problem creation, test case management, and editorial content with rich text editor
- Developed cutting-edge **Executor Service** in TypeScript leveraging **Docker containers** for **multi-language code execution** (Java, Python, C++); employed **Strategy and Factory design patterns** to optimize execution environments
- Designed robust **submission service with Fastify** handling high volume requests; utilized **Redis message queues** for efficient **asynchronous communication** and implemented **WebSocket** for **real-time feedback**

Project IDX Clone (Cloud IDE) | *React, TypeScript, Node.js, Docker, Zustand, WebSockets* ◯ GitHub
- Dynamically provisions **secure Linux containers** for each project using **Dockerode** ensuring complete isolation and consistency; supports multiple development environments with custom configurations
- Built full-featured **in-browser terminal** using **xterm.js** connected via **WebSockets** allowing **shell command execution**, package installation, and server start-up with real-time output streaming
- Developed **real-time file explorer** with complete **CRUD operations**, powered by **Chokidar** for instant synchronization between UI and backend

Mindfulness Meditation App | *React Native, TypeScript, Expo, Tailwind CSS* ◯ GitHub | 🤖 APK
- Custom **audio player** built with **expo-av** supporting **background playback**, seamless looping, synchronized countdown timers, and playback controls with sleep timer functionality
- Robust **local push notification system** using **expo-notifications** to schedule personalized daily reminders and meditation streaks to build consistency
- Implemented **file-based routing** with **Expo Router** for clean, scalable navigation structure and native-like transitions

DevOps & Cloud Expertise

AWS Cloud Fundamentals & Infrastructure ◯ GitHub
- Deployed and managed **Node.js applications** on **AWS ECS (Fargate)** using containerized workloads; built and pushed **Docker images** to **Amazon ECR** with secure ECS service configuration and task definitions
- Automated application deployment using **CI/CD pipelines with Jenkins**, reducing manual deployment effort; configured **AWS EC2 instances** for application hosting with environment setup and process management
- Utilized **Auto Scaling Groups (ASG)** to handle traffic spikes and improve application availability; implemented **AWS IAM roles and policies** for secure service-to-service communication with least-privilege access
- Integrated **Amazon CloudWatch Logs** for centralized logging and monitoring of ECS tasks and services; utilized **Amazon S3** for static asset storage, backup solutions, and configuration management
- Worked with **Docker** to containerize Node.js applications and manage multi-environment builds; familiar with **Kubernetes** concepts including Pods, Deployments, Services, and container orchestration
- Followed **Agile/Scrum methodology** using **Jira** for sprint planning, task tracking, issue management, and collaborative development workflows