Bhupesh Chikara

builtbychikara.dev | linkedin.com/in/bchikara | +1 (315) 575 7385 | bhupeshchikara@gmail.com

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java
Frontend: React, Next.js, Angular, Redux, Zustand, Jest, RxJS, HTML, CSS, D3.js, Three.js
Backend: Node.js, Express.js, GraphQL, REST API, Socket.IO, WebSocket, WebRTC
Databases: MongoDB, PostgreSQL, MySQL, Redis, DynamoDB, Firebase Realtime Database
Cloud & DevOps: AWS (EC2, S3, Lambda), GCP, Docker, Kubernetes, Jenkins, CI/CD, Cloudflare
AI & Automation: Google Gemini API, GPT-4 Vision, Playwright, Selenium, BeautifulSoup
Tools: Git, RabbitMQ, LaTeX, ReportLab, NPM, Chrome DevTools, Lighthouse, FFmpeg

EXPERIENCE

Deloitte | Senior Software Engineer   Feb. 2021 – Jan. 2024
Technologies: React.js, Redux, D3.js, Three.js, GraphQL, Docker, Kubernetes, AWS, Jenkins

- Increased user engagement by 35% and reduced decision-making time by 25% by architecting enterprise dashboard using React.js, Redux, Jest, D3.js, and Three.js with component-based design and memoization optimization.
- Achieved 99.99% uptime across distributed microservices by redesigning GraphQL service layer implementing schema stitching, query optimization, and circuit breaker patterns, reducing data over-fetching by 40%.
- Automated 100% of builds and deployments by containerizing applications using Docker/Kubernetes on AWS and building CI/CD pipelines with Jenkins implementing blue-green deployment strategies.
- Mentored 5 junior developers and conducted 50+ code reviews by establishing best practices for testability, efficiency, and style guidelines while debugging production issues affecting 10K+ users and authoring 7 HLD/LLD technical documents.

ToTheNew Pvt. Ltd. | Software Engineer   Feb. 2020 – Mar. 2021
Technologies: Angular 4+, RxJS, MongoDB, REST API, TypeScript

- Improved user engagement by 18% and reduced bundle size by 25% by transforming PWC enterprise dashboard frontend to Angular 4+ with lazy-loading modules, RxJS reactive patterns, code-splitting, and tree-shaking.
- Scaled system to support 500+ concurrent users by designing REST API architecture and MongoDB schema with indexing and aggregation pipelines for TCH learning portal, resolving top 3 critical crashes.
- Decreased page load times by 50% and boosted user retention by 15% by engineering asynchronous workflows using RxJS operators (switchMap, debounceTime) with request caching and retry logic for e-commerce platforms.
- Contributed to system architecture decisions through design reviews and triaged 20+ production issues using profiling tools and systematic debugging while maintaining technical documentation for API specifications.

Smart Joules Pvt. Ltd. | Software Engineer Intern   Sept. 2018 – Dec. 2019
Technologies: D3.js, TypeScript, Angular, Node.js, Express, REST API

- Reduced bug reports by 28% by developing interactive D3.js dashboards with real-time data streaming and creating reusable multi-select autocomplete component using TypeScript optimized for large datasets with virtual scrolling.
- Achieved community adoption and ongoing contributions by publishing open-source NPM module with modular API design supporting both template-driven and reactive forms in Angular.
- Reduced data-fetching overhead by 35% by implementing RESTful API layer with Node.js/Express using controller-service-repository pattern, integrating request batching and pagination.
- Improved accessibility to WCAG 2.1 Level AA standards by analyzing performance bottlenecks using Chrome DevTools and Lighthouse, optimizing rendering pipelines with change detection strategies.

PROJECTS

Opus ↗ | *Professional Recording & Streaming Platform*
Technologies: Node.js, TypeScript, BullMQ, FFmpeg, MediaMTX, IndexedDB, Socket.IO, AWS S3, Redis, Apollo GraphQL, PostgreSQL, Python Flask, Coqui TTS, Whisper ASR, GPT-4 API, MongoDB, JWT, OAuth

- Reduced post-recording wait time from 50 minutes to 5 minutes by architecting progressive chunk upload system with 10-second intervals, processing 90% of video during recording using Node.js, TypeScript, BullMQ job queue, and FFmpeg transcoding pipeline across 6 concurrent microservices.

- Enabled real-time collaboration for 8+ participants with sub-second latency by implementing MediaMTX WebRTC server, live preview compositor, multi-track recording to IndexedDB, and Socket.IO for distributed state synchronization across AWS S3 and Redis cache.
- Built cloud-native microservices architecture orchestrating 6 services (Backend API, Media Processor, TTS, Transcription, Translation, WebRTC Server) using Apollo GraphQL gateway, PostgreSQL with 8-table schema, and Redis pub/sub for inter-service communication.
- Deployed 3 AI-powered features processing 1000+ concurrent requests by building Python Flask microservices for free voice generation (Coqui TTS with 5 voices), Whisper ASR transcription with speaker detection, and GPT-4 API chapter/highlight generation with MongoDB persistence.
- Designed scalable chunk processing pipeline transcoding 4K video to multi-resolution (1080p/720p/480p) using FFmpeg, achieving 99.9% processing success rate with automatic retry logic, signed URL generation for secure media access, and JWT authentication with OAuth (Google/GitHub).

LaCarte ☑ | *QR-Powered Restaurant Platform*
Technologies: React, TypeScript, Zustand, Firebase, Recharts

- Served 100+ daily orders at 99.99% uptime by architecting dual-write pattern for distributed order persistence across 3 Firebase stores with ACID compliance using React, TypeScript, and Zustand, scaling to 5+ restaurants.
- Enabled 5+ concurrent staff to manage live orders with sub-second latency by implementing real-time Firebase listeners utilizing 10-transition state machine without polling overhead.
- Established 6-store Zustand architecture with multi-gateway payments (Layer/Razorpay), Recharts analytics dashboard, and hierarchical menu pipeline converting NoSQL to type-safe React components.

CodeNova ☑ | *AI-Powered Coding Interview Platform (Best Use of AI Award - CuseHacks 2025)*
Technologies: Socket.IO, Judge0 API, Next.js 15, TypeScript, MongoDB, React, Excalidraw, Google Gemini API, Anam AI, Node.js

- Achieved sub-500ms response times across 155+ problems by building full-stack platform with Socket.IO real-time code execution via Judge0 API for 8+ languages using Next.js 15, TypeScript, and MongoDB indexing.
- Created 9+ algorithm visualizers with smart step generation using React and Excalidraw whiteboard integration with MongoDB persistence for collaborative data structure sketching.
- Deployed dual AI tutoring (Google Gemini API + Anam AI voice avatar) with conversation persistence, PDF analysis, and GitHub-style analytics tracking 52-week activity using Node.js.

Job Application Assistant ☑ | *AI Automation Platform*
Technologies: GPT-4 Vision, Selenium, Python, ReportLab, LaTeX, MongoDB, BeautifulSoup4

- Achieved 99% form-filling success across major ATS platforms by engineering hybrid AI system (GPT-4 Vision + Selenium) processing 50+ applications per batch with persistent sessions using Python.
- Achieved 85+ ATS scores by developing resume tailoring engine with 3-iteration refinement, and dual PDF system (ReportLab + LaTeX) ensuring 100% one-page compliance.
- Extracted 100+ jobs per run by constructing MongoDB 5-state pipeline, LinkedIn scraper using BeautifulSoup4, and Rich-based interactive CLI with color-coded status visualization.

LEADERSHIP AND AWARDS

Best Use of AI Award – CuseHacks 2025 (Anthropic-Sponsored)
Won for CodeNova AI platform featuring Google Gemini tutoring, Anam AI voice avatar, Judge0 execution engine for 8+ languages, and 9+ interactive algorithm visualizers, competing against 50+ teams.

Applause Award (3x Consecutive) – Deloitte (2021-2024)
Recognized for backend architecture design, complex algorithmic solutions, and technical leadership in enterprise dashboard projects achieving 99.99% uptime and 35% user engagement improvement.

Winner – Hackathon 1.0, DIT University
Launched "Helping Hands" NGO matching platform using Angular and Flask, connecting 7 NGOs with 250+ beneficiaries for surplus food distribution with 60% faster processing speed.

Open-Source Contributor – NPM Package Maintainer
Published and maintained production-grade multi-select autocomplete NPM package with performance optimizations for large datasets, adopted by enterprise systems for improved data workflows.

EDUCATION

Syracuse University — Syracuse, NY
Master of Science in Computer Science — *Jan. 2024 – Dec. 2025*