

BHAGAT SINGH

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ABOUT ME

Experienced **Sr. Full Stack Developer** and **Tech Lead** with **5+ years** of expertise in designing and delivering scalable, high-performance backend and frontend systems. Passionate about **AI-driven automation**, **cloud architecture**, and building **cutting-edge solutions** that drive business impact. Skilled in leading full-stack teams, managing end-to-end project lifecycles, and fostering cross-functional collaboration. Expertise in integrating **AI models**, **cloud services**, and **data-driven workflows**. Thrives in fast-paced, high-growth environments, constantly learning and optimizing systems for real-world use cases.

TECHNICAL EXPERTISE & SKILLS

- **AI & Automation** : Hugging Face, OpenAI, LLaMA, LangChain, RAG pipelines, Ollama, multi-agent systems, vector databases (Chroma, Pinecone), document/image/audio processing pipelines
- **Backend & APIs** : Python (Flask, FastAPI), Node.js, JVM-based systems, REST, GraphQL, gRPC, WebSockets, microservices, event-driven & distributed systems, asynchronous architectures, performance optimization
- **Databases & Caching** : PostgreSQL, MySQL, MongoDB, Firestore, Redis
- **Frontend & Mobile** : Angular, Vue, Svelte, Remix, React Native, Flutter, Webpack, Vite
- **Cloud, DevOps & Observability** : Docker, Kubernetes, CI/CD, AWS (EC2, Lambda, S3, RDS, SQS, DynamoDB, CloudFormation, Bedrock), GCP(Compute Engine, BigQuery, Cloud Functions, Vertex AI)

EXPERIENCE

WIFFY – Senior Full Stack Developer

Tech Lead for Ecommerce, SaaS & GenAI Verticals | Jun 2023 – Present

- Led the design and hands-on development of a **multi-agent AI platform** within a legacy system, enabling **GenAI capabilities** without disrupting existing workflows. Decomposed functionality into **microservices** and designed agent-based orchestration where specialized agents handled reasoning, retrieval (RAG), and action execution. Implemented **event-driven communication using pub/sub patterns (Kafka, RabbitMQ)** to enable non-blocking, asynchronous processing, allowing free-form user inputs to dynamically trigger automated business workflows and significantly reduce manual intervention.
- Architected and owned enterprise integrations with **Amazon and IKEA** via **Centiero**, implementing reliable **SOAP and SFTP-based** data exchange pipelines. Built secure ingestion, reconciliation, and validation flows with retries, idempotency, and schema enforcement to ensure fault-tolerant and backward-compatible cross-system data consistency.
- Modernized a legacy frontend by upgrading **React v16 to v19**, resolving hydration and rendering bottlenecks. Reduced per-page hydration time by **~60%** by redesigning state management, replacing ad-hoc localStorage usage with structured approaches using **Redux Toolkit, and React Query**, combined with lazy loading, code splitting, and intelligent caching.
- Migrated backend services from **Node.js v16 to v24** and **JavaScript to TypeScript**, improving type safety and long-term maintainability. Applied **functional programming** principles to refactor critical modules, reducing debugging time by **~50% overall** and up to **90%** in complex cases, while strengthening security against injection attacks and improving robustness of request handling.
- Refactored monolithic services into **serverless architectures** by applying established **design patterns**, reducing deployment blast radius, improving scalability under burst traffic, and enabling independent scaling of business capabilities.
- Re-architected infrastructure along with NGINX, added **New Relic** and **ELK Stack** for observability, and implemented rate limiting to mitigate DDoS and web attacks, improving API reliability under load.

- Established a strong engineering quality bar through **design, code, and functional reviews**, and built **CI/CD testing pipelines** covering unit tests, integration tests, and automated regression checks. Led a cross-functional team of **10+ developers and QA engineers**, mentoring team members and introducing Agile workflows that improved release velocity by **30%**.

Classplus – Full Stack Developer (Multimedia)

Tech Lead for Video Streaming & Analytics | Jan 2021 – Jun 2023

- Real-time Video Analytics:** Integrated **Conviva** for real-time video performance monitoring, identifying playback bottlenecks and reducing buffering issues by **50%**, resulting in measurable improvements in viewer engagement and satisfaction.
- Low-Latency Streaming & UI Experience:** Implemented **WebRTC and HLS** pipelines, reducing live video session latency from **25 seconds to 5 seconds**. Enhanced user experience through a cohesive UI strategy combining **Material UI, Tailwind CSS, AntDesign**, advanced animations with **GSAP, Framer motion** and scalable state management using **Redux, Zustand, and SingleSpa**.
- Scalable Event Management:** Led integrations with **Ant Media, 100ms, and Agora** to support large-scale live events, reliably handling **50K+ concurrent users**. Validated system behavior through **unit and integration testing in headless environments** before production rollouts.
- Monitoring & Observability:** Deployed and tuned **Prometheus, Grafana, and Alertmanager**, introducing actionable alerts, custom dashboards, and SLO-based monitoring. Improved system reliability by **50%+** and significantly reduced mean time to detection and resolution of production incidents.
- Content Security & Protection:** Designed and implemented **DRM and token-based authorization systems** for video services, coupled with real-time alerting for suspicious access patterns. Reduced unauthorized content access by **75%** while maintaining seamless playback for legitimate users.

CrossX – Full Stack Developer

Founder & Lead Developer | Jan 2019 – Jan 2021

- Developed E-Commerce Solutions:** Designed, developed, and deployed **dynamic e-commerce applications** for clients, boosting their sales by **10x - 30x**.
- Client Success:** Worked with **Infidata Technologies, AKA Technologies, and Lake of Cakes**, delivering **tailored full-stack solutions** that increased operational efficiency and customer engagement.

EDUCATION

Sai Vidya Institute of Technology, Bangalore, KA, IN
Bachelor of Engineering in Information Science and Engineering

[2017 - 2021]

GPA: 7.8

ACHIEVEMENTS

- Hackathon Champion:** Won **1st place** in an **AI Hackathon**, with the winning project going into production as a key feature.
- Recognition:** Awarded Hard-Hitter, Mr Consistent, and Super Striker for delivering consistent, high-impact work across multiple projects.
- Mentorship:** Actively mentored junior developers and led knowledge-sharing sessions to improve team productivity and technical skills.