



Khushvendra Singh
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech (AI & DS)	Indian Institute of Technology Jodhpur	8.20 / 10.0	2024 – 2028
Senior Secondary	CBSE Board	94.4%	2024
Secondary	CBSE Board	84.8%	2022

Experience

- Summer of Bitcoin – ContextVM** May 2026 – Present
Open Source Contributor, TypeScript SDK Remote
 - Contribute to the ContextVM TypeScript SDK by designing a **concurrent streaming protocol** for **large-payload transfer** with a **sub-50ms latency** and building a **Tool registry** resolving collisions across MCP servers.
 - Author unit and **E2E tests** with **~100%** codebase coverage, resolve transport-layer bugs, refactor network layers, and **co-author protocol specifications** (CEPs) to improve **cross-client interoperability** for AI agents.
- InterIIT Tech Meet 14.0 – Arista Networks** Sep 2025 – Dec 2025
Project Member (Gold Medalist) Jodhpur, India
 - Devised a probabilistic graph-coloring algorithm using **Projected Gradient Descent** for distributed channel allocation, improving configuration stability by **76%** and eliminating neighbor interference to **near 0%**.
 - Constructed a high-throughput **Kafka telemetry pipeline** for real-time systems data analysis, achieving up to **40% QoE** gains and a **30% reduction** in interference.

Projects

- CIPHER – Cryptographic Incentive Protocol for Honest Edge Routing** May 2026 – Present
Go, Cryptography, Game Theory, Distributed Systems, QUIC [GitHub](#)
 - Design an **O(1) Challenge-Response Delivery Proof** protocol via a **dual-nonce lottery** to solve the Fair Exchange problem with **under 10ms overhead** per chunk.
 - Implement a **Request Purgatory** state machine and **Reed-Solomon erasure coding** inside a **QUIC-based Go daemon**; while sustaining **sub-200ms delivery latency** across simulated nodes.
- AxeP – Attention Exchange Protocol** Feb 2026 – Mar 2026
Flutter, Dart, Python, WebSockets, LLMs [GitHub](#)
 - Developed a cross-platform attention tracking app using **Flutter and Dart**, with native Android telemetry via Kotlin screen Capture and Accessibility APIs that reduced battery consumption by **25%**.
 - Established a **Python REST API** and **WebSocket** pipeline for high-frequency handshakes across devices **under 50ms**, integrating an **LLM classifier** to analyze user attention states at over **90% precision**.
- Torrentium – Decentralized P2P File Sharing System** Jun 2025 – Aug 2025
Go, libp2p, SQLite, WebRTC, Kademlia DHT, Docker [GitHub](#)
 - Architected a **serverless P2P** file-sharing system in Go using **libp2p** and **Kademlia DHT** for deterministic routing across **3+** **heterogeneous network topologies** without centralized coordination.
 - Implemented **WebRTC parallel transport** protocols to sustain **sub-500ms RTT** across 10+ concurrent peers, and added a peer trust scoring system that improved network reliability by **30%**.

Key Courses Taken

Introduction to Computer Science, Data Structures and Algorithms, Principles of Computer System I, Principles of Computer System II, Probability and Statistics, Pattern Recognition and Machine Learning

Technical Expertise

- Programming Languages:** C/C++, Go, Python, JavaScript, TypeScript, SQL
- Systems & Infrastructure:** Linux Environments, Scalable Systems, Distributed Systems, WebRTC, Docker, Git
- Web Technologies & Frameworks:** React.js, Next.js, Node.js, libp2p, GitHub Actions (CI/CD)
- Database & Cloud Technologies:** MongoDB, PostgreSQL, Redis, Google Cloud Platform (GCP), AWS, Kafka

Achievements & Recognition

- Summer of Bitcoin 2026:** Selected globally among **~50 developers** for open-source Web3 fellowship. 2026
- Gold Medal, InterIIT Tech Meet 14.0:** Ranked **1st among 23 IITs** for an Arista Networks framework. 2025
- Alumni–Student Mentorship Program:** Created an anonymous matching system for **25 mentors** and **125+ students**, fostering long-term mentor–mentee relationships. 2025
- Legacy Initiative:** Led a **student-driven fundraising initiative** that secured **Rs. 11+ lakh** in alumni contributions for campus coworking infrastructure. 2025

Leadership & Responsibilities

- Coordinator,** Society of Alumni Affairs, IIT Jodhpur. Jul 2025 – Apr 2026
- Student Guide,** Student Wellbeing Committee, IIT Jodhpur. Jul 2025 – Mar 2026