Salugu Harshita Bhanu

Applying for: Summer of Bitcoin 2026 - Development Track

Mobile: +91-9000229595

Github: github.com/Git-brintsi20

Email: shiki2hustle@gmail.com

LinkedIn: Salugu Harshita Bhanu

Portfolio: harshita-bitcoin.dev

Bitcoin Projects: github.com/Git-brintsi20/bitcoin-projects

Objective

Passionate developer with strong cryptography and distributed systems foundation seeking to contribute to Bitcoin's open-source ecosystem through Summer of Bitcoin 2026. Experienced in building security-critical applications with encryption, authentication protocols, and real-time systems. Eager to apply my full-stack development skills to Bitcoin Core development, Lightning Network implementations, and Bitcoin educational tools.

Bitcoin & Cryptocurrency Projects

- **Bitcoin Transaction Parser & Analyzer**: [Solo Project - In Progress]
  - **Tech Stack**: Node.js, TypeScript, Bitcoin Core RPC, WebSocket, React.js, Chart.js
  - Building real-time Bitcoin transaction parser that decodes raw transaction hex, analyzes UTXO inputs/outputs, calculates fees, and visualizes transaction graphs.
  - Implementing Bitcoin Script interpreter to decode and explain P2PKH, P2SH, P2WPKH, and SegWit transactions with human-readable script breakdown.
  - Integrating mempool analysis dashboard showing transaction priorities, fee rates, and block space optimization with live data from Bitcoin node.
  - **Repository**: github.com/Git-brintsi20/bitcoin-tx-parser
- **Lightning Network Payment Channel Simulator**: [Solo Project - In Progress]
  - **Tech Stack**: Python, bitcoinlib, FastAPI, WebSocket, React.js, D3.js for network visualization
  - Developing Lightning Network channel simulator demonstrating payment routing, HTLC (Hash Time-Locked Contracts) creation, and multi-hop payment pathfinding.
  - Implementing commitment transaction updates, penalty mechanisms for breach attempts, and cooperative/force channel closures.
  - Building interactive visualization of payment channels, routing nodes, and liquidity distribution across simulated Lightning Network topology.
  - **Repository**: github.com/Git-brintsi20/lightning-simulator
- **Bitcoin Address Validator & HD Wallet Generator**: [Solo Project - In Progress]
  - **Tech Stack**: TypeScript, bitcoinjs-lib, bip39, Next.js 14, TailwindCSS
  - Creating comprehensive Bitcoin address validation tool supporting Legacy (P2PKH), SegWit (P2WPKH), Native SegWit (Bech32), and Taproot (P2TR) address formats with checksum verification.
  - Implementing BIP32/BIP39/BIP44 compliant HD wallet generator with mnemonic seed phrase creation, derivation path visualization (m/44'/0'/0'/0), and multi-signature address generation.
  - Building educational interface explaining address encoding (Base58Check, Bech32), public/private key cryptography (ECDSA secp256k1), and wallet security best practices.
  - **Repository**: github.com/Git-brintsi20/btc-address-tools
- **Mini Blockchain Explorer & Block Visualizer**: [Solo Project - In Progress]
  - **Tech Stack**: React.js, Node.js, Bitcoin Core RPC, PostgreSQL, Redis caching, WebSocket
  - Developing blockchain explorer clone fetching real-time block data, transaction details, and network statistics from Bitcoin testnet node via RPC calls.
  - Implementing block header parsing (version, previous block hash, merkle root, timestamp, difficulty target, nonce), merkle tree visualization, and difficulty adjustment calculations.
  - Building mempool monitor with transaction sorting by fee rate, RBF (Replace-By-Fee) detection, and block template prediction for next block inclusion.
  - **Repository**: github.com/Git-brintsi20/bitcoin-explorer

Cryptography & Security Projects (Bitcoin-Adjacent Skills)

- **CipherSuite - Enterprise Security Platform**: [Solo Project]
  - **Tech Stack**: MERN Stack, Next.js 15, Python/Flask, AES-256-GCM, TOTP 2FA, WebSocket
  - **Bitcoin Relevance**: Cryptographic principles (symmetric encryption, hash functions, digital signatures) directly applicable to Bitcoin transaction signing, wallet encryption, and secure key management.
  - Built password vault with AES-256-GCM encryption demonstrating understanding of cryptographic security—similar to Bitcoin wallet encryption and seed phrase protection.
  - Implemented TOTP-based 2FA and JWT authentication mirroring secure access patterns needed for Bitcoin wallet applications and exchange platforms.
  - **Repository**: github.com/Git-brintsi20/ciphersuite
- **Bug Tracker SaaS - Distributed Systems Architecture**: [Solo Project]
  - **Tech Stack**: Next.js 14, TypeScript, PostgreSQL, Prisma ORM, Redis, WebSocket, Docker Compose
  - **Bitcoin Relevance**: Microservices architecture and distributed systems thinking applicable to Bitcoin node development, Lightning Network routing, and P2P network protocols.
  - Architected microservices system with independent services demonstrating understanding of decentralized architecture—core concept in Bitcoin's peer-to-peer network design.
  - Implemented Redis caching and real-time WebSocket communication similar to Bitcoin node mempool synchronization and block propagation mechanisms.
  - **Repository**: github.com/Git-brintsi20/bug-tracker-saas

Technical Skills (Bitcoin Development Focused)

- **Bitcoin-Specific**: Bitcoin Core RPC, bitcoinjs-lib, bitcoinlib (Python), Lightning Network Protocol, BIP32/39/44, PSBT
- **Cryptography**: ECDSA secp256k1, SHA-256, RIPEMD-160, Base58Check, Bech32, AES-256-GCM, Hash Functions, Digital Signatures
- **Programming Languages**: TypeScript, JavaScript (Node.js), Python, C++ (learning for Bitcoin Core), Rust (learning)
- **Backend & APIs**: Node.js, Express.js, FastAPI, RESTful APIs, WebSocket (real-time), JSON-RPC
- **Frontend Development**: React.js, Next.js 14, TypeScript, TailwindCSS, D3.js/Chart.js (data visualization)
- **Database & Caching**: PostgreSQL, MongoDB, Redis, Prisma ORM
- **DevOps & Tools**: Docker, Git/GitHub, Linux/Ubuntu, CI/CD, VS Code, Postman
- **Security Practices**: OWASP Top 10, JWT/OAuth 2.0, 2FA, Secure Key Storage, Threat Modeling

Education

- **Indian Institute Of Information Technology, Jabalpur** — **Madhya Pradesh, India**
  Bachelor of Technology - Computer Science and Engineering — CGPA: 8.2 — **August 2023 - May 2027**

- **Sri Venkateswara Junior College** — **Visakhapatnam, India**
  Class XII: 97.1% — **June 2021 - May 2023**

Coding & Security Profiles

- **GitHub**: github.com/Git-brintsi20 - Active contributions to open-source projects
- **LeetCode**: leetcode.com/u/hac_brintsi20/ - 200+ problems solved (algorithms & data structures)
- **TryHackMe**: tryhackme.com/r/p/hacbrintsi20 - Cybersecurity practice

Hackathons & Achievements

- **HackByte 3.0 - Top 8 Finalist** — **April 2025**
  Team Pixel Pirates - PlantZ AI Healthcare Platform — **IIIT Jabalpur**

  - Secured Top 8 among 126 teams in 36-hour hackathon, demonstrating rapid prototyping and teamwork skills essential for collaborative Bitcoin development.

Leadership & Community Engagement

- **PR Team Member & Event Anchor** — **April 2024**
  HackByte 2.0 Hackathon — **IIIT Jabalpur**

  - Coordinated technical event execution and participant engagement—skills transferable to Bitcoin community building and developer advocacy.

- **Samvaad Literary and Quizzing Society** — **2023 - Present**
  Active Member — **IIIT Jabalpur**

  - Organized 10+ events fostering collaborative learning environment, mirroring open-source community dynamics in Bitcoin development.

Relevant Certifications

- **Google Cybersecurity Professional Certificate** — **2024**
  Coursera - Cryptography, Network Security, Threat Analysis
- **Teachnook Cybersecurity Internship** — **2024**
  Security Fundamentals, Ethical Hacking, Encryption

Why Bitcoin & Summer of Bitcoin?

I'm deeply fascinated by Bitcoin's elegant solution to the Byzantine Generals Problem and its revolutionary approach to decentralized consensus. My background in cryptography (AES-256, digital signatures), distributed systems architecture (microservices, P2P concepts), and security-critical application development positions me well to contribute meaningfully to Bitcoin's ecosystem. I'm particularly interested in Lightning Network scalability solutions, Bitcoin Core development, and building educational tools that make Bitcoin technology accessible to developers worldwide. Summer of Bitcoin represents the perfect opportunity to immerse myself in Bitcoin's technical depths while contributing to projects that advance financial sovereignty and open-source collaboration.