MD ATHAR SHARIF

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PROFESSIONAL SUMMARY

B.Tech Computer Science student at IIIT Naya Raipur (CGPA 9.05) who ships software end to end – from a cross-platform inventory system running in production institute-wide, to zero-knowledge blockchain protocols and RL research. Strong foundation in distributed systems, Rust and TypeScript development, and data structures & algorithms, with a track record of learning new technologies quickly and writing tested, maintainable code.

EDUCATION

Bachelor of Technology, Computer Science & Engineering, IIIT Naya Raipur — 2024 – Present
Current CGPA: 9.05

CBSE Class XII, DAV Public School, CDA, Cuttack — 2023
Percentage: 94.4%

CBSE Class X, DAV Public School, CDA, Cuttack — 2021
Percentage: 96.8%

ACHIEVEMENTS

JEE Advanced / Mains 2024	AIR 13,238 (Advanced) | AIR 18,026 (Mains)
NXP AIM Challenge 2025	Regional Finalists (Top 7 of 31 teams), qualified for Finals (NXP Semiconductors)
Save the Survivor	1st Runner-Up (IIIT Bhubaneshwar)
Stellar Journey to Mastery	Black Belt (ChainChit), Blue Belt (TrustVault) (Rise in Web3 × Build on Stellar)
Bun (oven-sh/bun)	Reported a reproducible integer-overflow bug in `Date.now()`

EXPERIENCE

SDE Intern, Nexicat — Nov 2026 – Present

PROJECTS

IIITNR Inventory System — Jan 2026 – Present
Kotlin Multiplatform · Jetpack Compose · Fastify · Drizzle ORM · PostgreSQL · GitHub Actions

- Officially adopted by IIIT Naya Raipur to manage institute-wide inventory of 359 items across 100+ users; architected as a cross-platform system (Android, iOS, desktop, web) from a single shared Kotlin codebase.
- Engineered secure authentication (JWT, role-based access, Google Sign-In across web and native) with HTTP 304 caching and SQLDelight for offline-first operation.
- Hardened production reliability: concurrency-safe stock updates resolving multi-admin race conditions, an append-only audit log for every atomic change, nightly PostgreSQL backups to cloud storage, and structured error handling.

ChainChit – On-Chain Chit Fund Platform — Jun 2026 – Sep 2026
Stellar Soroban · Rust · Next.js · TypeScript · GitHub Actions CI/CD

- Sole-authored a decentralized rotating-savings (chit fund) platform: 5 Soroban smart contracts (3.9K lines of Rust) covering group lifecycle, sealed bidding, identity, reputation, and dispute resolution.
- Deployed on Stellar testnet with a tester cohort of 50+ users and verifiable on-chain activity; drove a feedback-to-roadmap improvement loop with monitoring and analytics.
- Built factory-pattern contract deployment to isolate per-group on-chain cost, with CI running automated contract and frontend checks on every push.

AegisProcure – ZK Sealed-Bid Procurement Protocol Aug 2026 – Sep 2026
Midnight · Compact smart contracts · Zero-Knowledge Proofs · Next.js · Vitest

- Architected a trustless sealed-bid reverse-auction protocol for B2B/GovTech procurement on the Midnight blockchain, preventing bid leakage using confidential state and zero-knowledge proofs.
- Authored the confidentiality contract in Compact with 4 ZK circuits (auction creation, bid commitment, sealed reveal, finalize) that validate bids on-chain without revealing them; deployed on the Midnight Preprod network.
- Developed the Next.js dApp with Lace wallet integration and Vitest contract tests, all gated behind CI pipelines.

MARL Fleet Rebalancing Under Demand Shift (Research) Sep 2026
Python · PettingZoo · IPPO / MAPPO · RL experiment infrastructure

- Contributor to a measurement study of how frozen RL fleet-rebalancing policies degrade when deployment demand differs from training demand, on a 16-zone Manhattan simulation over 108 hourly demand windows (6–14 April 2026).
- Built reproducible training/evaluation pipelines, a checkpoint-selection protocol, a parameterized demand-shift scenario matrix, and a test suite validating agents, baselines, and experiment runs against tuned LP and greedy references.

ADDITIONAL PROJECTS

- **BlindPulse** – ZK anonymous feedback on Midnight: respondents prove eligibility (membership / token holdings) without revealing identity; only aggregate tallies settle on-chain.
- **Aximo** – Cross-platform AI shell agent (Python, FastAPI, Gemini API) translating natural-language voice/text into system commands, with a documented REST API.

OPEN SOURCE CONTRIBUTIONS & TOOLS

- Rust systems tooling: **Tuishark** (live packet-sniffer TUI over pcap/etherparse with GeoIP), **uded** (hardware-diagnostics CLI for used devices), **TarSmith** (interactive tar installer), and **nm-notify** (Wi-Fi roaming notifier daemon).
- Authored **Dynamic Island**, a QML media/notification bar widget for Omarchy (Hyprland), published and verified in the official plugin marketplace.
- Contributed to open-source media and reading apps: merged a subtitle-source selection fix in **REX-Player** (mpv-based player), and authored an optional vertical edge-swipe brightness gesture with unit tests in **Mihon** (popular Android manga reader; open PR).

SKILLS

Languages & Runtimes	Python, Rust, Kotlin, JavaScript/TypeScript, C/C++, SQL
Frameworks & Libraries	React/Next.js, Node.js/Fastify, FastAPI, Jetpack Compose, Kotlin Multiplatform, Soroban SDK, PettingZoo
Core CS	Data Structures & Algorithms, Distributed Systems, Object-Oriented Design, REST API Design, RDBMS, Smart Contract & ZK Proof Design
DevOps & Tools	Git, GitHub Actions (CI/CD), Docker, Linux, Nix, PostgreSQL, Drizzle
Other	Gemini/LLM APIs

INTERESTS

Zero-Knowledge & Confidential Computing · AI & Reinforcement Learning · Distributed Systems · Low-Level & Systems Programming · Automation