

Vishwas Bajaj

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SUMMARY

Open-source focused Computer Science student working on systems programming and Bitcoin Core-adjacent tooling. Comfortable with conservative, review-driven development prioritizing correctness, reproducibility, and long-term maintainability.

EDUCATION

Bachelor of Technology in Computer Science — Undergraduate Student

TECHNICAL SKILLS

Languages: C++, C, Python, Bash (POSIX)

Core CS: Data structures, algorithms, operating systems, computer networks, concurrency

Systems: Linux internals, POSIX APIs, processes, threads, IPC, sockets

Bitcoin: UTXO model, transactions, scripts, mempool, consensus, Bitcoin Core RPC

Tooling: Git, Make, CMake, Autotools, GCC, Clang

Debugging & Testing: GDB, Valgrind, strace, unit and functional tests

PROJECTS

Bitcoin Fee Estimator — Python-based CLI using Bitcoin Core RPC to estimate transaction fees from live mempool data based on confirmation targets and fee market behavior.

Lightning Network Discord Tipping Bot — Implemented BOLT11 invoice creation, Lightning payment flows, retries, and failure handling to study real-world LN usage and scalability constraints.

OPEN SOURCE CONTRIBUTIONS

Astropy — Stabilized datetime arithmetic tests using refined Hypothesis strategies; removed flaky and nondeterministic edge cases in a large, mature codebase.

Doxygen — Documentation maintenance and archived link fixes (merged pull requests).

SELECTED PULL REQUESTS

Astropy PR #19178 (merged) — Stabilized datetime arithmetic tests by refining Hypothesis strategies and eliminating nondeterministic failures.

Astropy PRs #19240, #19243, #19245, #19252, #19253 (merged) — Documentation and test-quality improvements improving reliability and contributor experience.

Doxygen PR #11947 (merged) — Documentation maintenance and archived reference fixes.

ENGINEERING FOCUS

Correctness-first development and conservative change design

Root-cause analysis of flaky and nondeterministic test failures

Minimal diffs, review-driven iteration, reproducible results

Reading and understanding large existing production codebases

BITCOIN EXPOSURE

Worked with Bitcoin Core RPC and mempool data for fee estimation

Studied fee markets, confirmation targets, and transaction inclusion

Built Lightning Network application handling invoice lifecycle and failures

PROFESSIONAL EXPERIENCE

Athena Blockchain Consulting LTD. — Designed cloud systems for a financial application; AWS (Debian EC2, NGINX), CI pipelines using GitHub Actions, and security audit collaboration.

Technical GTM Freelancer — Authored security-focused technical documentation, resolved Linux deployment issues, and built internal tooling.