

Lakshya Agarwal

Jaipur, India | la9928609007@gmail.com | lakshya9461.in | github.com/Lakshya9461 | linkedin.com/in/lakshya70

EDUCATION

JK Lakshmipat University, Jaipur, India

Aug 2024 – May 2028

B.Tech in Computer Science

Coursework: DSA, Machine Learning, Computer Networks, DBMS, Cloud Computing, System Design

TECHNICAL SKILLS

Languages: Python, JavaScript, C++, Dart, SQL

Machine Learning / AI: PyTorch, Scikit-learn, XGBoost, Pandas, NumPy, SHAP, Ollama

Frameworks & Web: Electron, Flutter, FastAPI, REST APIs, SQLite, Firestore

Infrastructure: Linux (Debian/Ubuntu/Arch), Docker, Docker Compose, SSH, Cloudflare Tunnel, Tailscale

Networking & Tools: TCP/IP, DNS, LAN, Git, GitHub, npm, pip, ffmpeg, yt-dlp

Certification: CITI Program, Data or Specimens Only Research

Score 97

PROJECTS

Aegis Browser

Electron, Chromium, JavaScript

- Built a privacy-focused Electron browser that isolates renderer privileges behind a preload bridge, with nodeIntegration disabled across all four windows.
- Implemented ad-blocking and anti-fingerprinting across approximately 1,400 filters in three aggressiveness levels, plus incognito sessions, a download manager, and tab suspension.
- Added a zero-dependency 13-test suite on Node.js's built-in test runner, guarding a false-positive URL corpus so aggressive filters cannot break real sites.

SentinelDNS

C++20, Unix Sockets, NDJSON IPC, Git Workflow

- Co-built a local-first DNS security agent whose C++20 core handles wire encode/decode, a TTL-bound cache, policy matching, a UDP listener and resolver, and a telemetry sink.
- Designed policy as a reviewed, git-tracked file with no API write path (a second contributor proposes over feature branches, a human merges) plus a read-only NDJSON diagnostics API.

CashWand

Flutter, Dart, SQLite

- Built an offline-first finance tracker with SQLite persistence, overall and category budgets that warn before you go over, and a biometric app lock (fingerprint, Face Unlock, PIN).
- Wrote 159 tests across entities, repositories, and providers, plus a manual UAT plan covering data isolation, UI reactivity, and data integrity.

RESEARCH EXPERIENCE

Undergraduate Research Intern, Early Sepsis Prediction (MIMIC-IV)

May 2026 – Aug 2026

Supervised by Dr. Amit Sinhal, JK Lakshmipat University

- Built an end-to-end ML pipeline for 6-hour-horizon Sepsis-3 prediction on MIMIC-IV ICU data: suspected-infection identification, patient/admission/ICU preprocessing, and temporal features.
- Benchmarked five approaches (XGBoost, Random Forest, LSTM, Logistic Regression, qSOFA) on identical windows with 5-fold GroupKFold splits by patient to prevent leakage.
- XGBoost led at AUROC 0.7935 / AUPRC 0.0275 at 0.60% window prevalence; used SHAP for interpretability, with external validation on eICU underway.