

NEERAJ KUMAR

+918800119639 ✉ reachoutneerajkumar@gmail.com 🐙 github 🌐 Portfolio 🌐 linkedin 📍 New Delhi

WORK EXPERIENCES

Navodita Infotech | Internship

Jul 2025 - Aug 2025

Backend Intern

Remote • Delhi

- Built a JWT-based authentication and RBAC system securing REST APIs across 3 user roles, implementing token refresh and session expiry flows.
- Developed Express middleware for route protection, reducing redundant authorization checks by ~40% and improving code modularity.
- Containerized backend services using Docker, ensuring consistent deployment environments and simplifying service portability.

Technologies / Skills Used : Node.js, Express, JWT, Docker

PROJECTS

Options Pricing Simulator | 🌐

Feb 2026 - Mar 2026

- Developed a Monte Carlo simulation engine to price European options with configurable simulation runs.
- Validated results against Black-Scholes analytical model, achieving <0.03 pricing deviation at 10,000 simulations.
- Computed option sensitivities (Delta, Vega, Gamma, Theta) to support quantitative risk analysis.

Technologies / Tools Used : Python, NumPy, SciPy

ClipIt | 🌐

Dec 2025 - Jan 2026

- Designed a concurrent video processing backend, handling multiple clipping requests with collision-free file management.
- Implemented thread-safe ID generation, ensuring deterministic output under parallel workloads.
- Integrated FFmpeg pipeline for efficient video slicing, reducing processing overhead.
- Deployed containerized service using Docker, enabling reproducible builds and scalable execution.

Technologies / Tools Used : Python, Next.js, Docker, FFmpeg

RedisCLI | 🌐

Mar 2026 - Apr 2026

- Built a Redis CLI client from scratch in C++17, implementing the full RESP2 protocol serializer and parser.
- Implemented event-driven Pub/Sub mode using poll() to multiplex stdin and Redis socket simultaneously - streaming published messages while keeping terminal input responsive via GNU Readline callback API.

Technologies / Tools Used : C++, POSIX Sockets, RESP2

EDUCATIONS

University School of Automation & Robotics, GGSIPU | Delhi, India

Nov 2022 - Jul 2026

Bachelor of Technology - Automation and Robotics

GPA : 7.00

TECHNICAL SKILLS

Languages: C/C++ , Python, JavaScript

Backend: Node.js, Express.js, FastAPI, REST API, WebSockets

Databases: MongoDB, MySQL, Redis

Infrastructure: Linux, Git, Docker, AWS EC2

ADDITIONAL ACHIEVEMENTS

- Achieved peak LeetCode contest rating of 1614, ranking in the top 20% of global competitors across weekly and biweekly contests.

EXTRACURRICULAR

- Represented college Volleyball team in inter-collegiate tournaments, demonstrating consistent teamwork and competitive commitment.