

Mohit Kumar

Software Engineer

www.linkedin.com/in/mohit-kumar-sp | mohitkumar-six.vercel.app | github.com/Zyrexam | candidates.intervues.club/u/mohit-kumar

SUMMARY

Software Engineer and Undergraduate Researcher with experience in system optimization, federated learning, and security-focused compiler pipelines. Proven track record in developing high-accuracy Machine Learning models, privacy-preserving frameworks, and automated vulnerability patching systems.

EXPERIENCE

NLP 'Solidity Compiler Researcher

IIT Jodhpur

Sep 2025 – Jan 2026

- Designed a three-phase pipeline converting natural-language intent into secure Solidity contracts.
- Engineered validated JSON extraction, rule-constrained generation, and automated compilation repair mechanisms.
- Integrated Slither, Mythril, and Semgrep static analysis tools with LLM-based patching for automated vulnerability detection and remediation.

NLP 'Solidity Compiler Researcher

IIT Jodhpur

Jun 2025 – Jul 2025

- Designed a three-phase pipeline converting natural-language intent into secure Solidity contracts.
- Engineered validated JSON extraction, rule-constrained generation, and automated compilation repair mechanisms.
- Integrated Slither, Mythril, and Semgrep static analysis tools with LLM-based patching for automated vulnerability detection and remediation.

Undergraduate Researcher

Ubisys Lab, IIT Jodhpur

May 2025 – Aug 2025

- Co-authored FedMeet (published at ACM ICDCN 2026), creating a privacy-preserving federated learning framework for multi-sensor human activity recognition under non-IID settings.
- Engineered data preprocessing and training pipelines featuring sensor synchronization, Gaussian masking, and BiLSTM-based federated learning.
- Achieved 87.97% test accuracy, outperforming state-of-the-art baselines by 12%.

EDUCATION

IIT Jodhpur · B.Tech · 2026

Indian Institute of Technology (IIT), Jodhpur · B.Tech · 2022 – 2026

SKILLS

Languages and Frameworks: C++, Go, Java, JavaScript, Jupyter Notebook, Kotlin, Lasso, Python, Solidity, SQL, TypeScript, BiLSTM, FastAPI, Flask, Flower, Next.js, Node.js, React, Spring Boot, Spring Kafka, TensorFlow, XGBoost

Databases: MongoDB, MySQL, PostgreSQL, Redis

Tools: Android Studio, AWS (EC2, S3, Lambda), Caching Strategies, CI/CD, Claude Code CLI, Distributed Systems, Docker, Docker Compose, Firebase, GCP, Git, GitHub, GitHub Actions, GitHub Copilot, Grafana, gRPC, IntelliJ IDEA, Kafka, Kubernetes, Linux, Mythril, Ollama, ONNX, OOP, Postman, Prometheus, Redis Pub/Sub, REST APIs, Scalability, Semgrep, Slither, SOLID, System Design, VS Code

PROJECTS

payment-idempotency-proxy

Stateless payment proxy preventing duplicate charges with distributed locks and Redis caching. Architected a stateless payment proxy utilizing distributed locks and Redis caching to eliminate duplicate charges.

FastAPI, Redis, PostgreSQL, Prometheus

[VIEW REPO](#)

EdgeCraft-CDN

Dependency-free C++17 edge cache — LRU + TTL eviction with round-robin routing across 3 edge servers. Implemented a dependency-free C++17 edge cache supporting LRU and TTL eviction algorithms alongside round-robin routing across edge servers.

C++17, LRU + TTL, Zipfian traffic

[VIEW REPO](#) '

TurboTTS-Proxy

Go gRPC proxy cutting time-to-first-audio for real-time voice agents with SHA-256 keyed caching. Developed a Go gRPC proxy utilizing SHA-256 keyed caching to reduce time-to-first-audio for real-time voice applications.

Go, gRPC, Kubernetes, Redis

[VIEW REPO](#) '

Additional projects: url-shortener, Webhook-Delivery-System, CloudVault, AI Twitter Bot, VideoScale, Payment Idempotency Proxy, EdgeCraft CDN

AWARDS

Publication: FedMeet, DSA Problem Solving, JEE Qualification, Mentorship Role at DevLup Labs & Programming Club, Tech Head, Ignus & Akshar Festivals, Published at ACM ICDCN '26, Published in Elsevier TCS, LeetCode 400+, Codeforces Pupil, CodeChef 1500+