

# Kshitij Singh

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## EDUCATION

### Dayananda Sagar College of Engineering

Bengaluru, Karnataka

Bachelor of Engineering in Computer Science and Engineering (Data Science) CGPA: 8.35/10

2023 – 2027

### Air Force School

Bengaluru, Karnataka

XII (CBSE - 93%)

2023

## TECHNICAL SKILLS

**Languages:** Python, C++, JavaScript, SQL, R

**Frontend:** React, Tailwind CSS, HTML, CSS

**Backend:** Node.js, Express, FastAPI, REST APIs

**Databases:** PostgreSQL, MongoDB, MySQL

**Machine Learning:** PyTorch, TensorFlow, scikit-learn, XGBoost, Pandas, NumPy

**Tools & Platforms:** Git, Docker, Linux, AWS

## PROJECTS

### IntelX – Cybersecurity Intelligence Platform | *React, Python, Docker, Tailwind CSS*

[GitHub](#)

- Designed and developed a unified OSINT and security intelligence platform featuring 5 integrated tools: Web Analysis, Malware Forensics, Recon, Steganography Detection and URL Tracing for rapid attack surface discovery.
- Built a Python backend with REST APIs for threat intelligence aggregation, integrating VirusTotal, DNS lookups, and breach data analysis and containerized it with Docker for scalable deployment.
- Created responsive frontend using React, Vite, and Tailwind CSS with Framer Motion animations, featuring glassmorphism UI and interactive components.
- Incorporated multiple security reconnaissance APIs to automate threat intelligence gathering, correlating data from DNS lookups, VirusTotal scanning, blacklist checks, and digital footprint analysis in real-time.

### Visual Language Translation & Typesetting Engine | *Python, PyTorch, OpenCV, PaddleOCR, LaMa*

[GitHub](#)

- Engineered an end-to-end visual text translation pipeline with a 4-stage architecture: text detection using YOLOv5, OCR extraction with PaddleOCR, background inpainting with LaMa, and context-aware translation.
- Implemented text detection with transfer learning and integrated LaMa model for inpainting to reconstruct backgrounds after text removal, preserving original visual style for clean translated text overlay.
- Deployed with FastAPI backend supporting batch processing for multi-image documents, with support for Google Translate and DeepL translation engines.

### Full-Stack Ecommerce Platform | *Node.js, Express, PostgreSQL, React*

[GitHub](#)

- Developed full-stack ecommerce application with Node.js, Express, PostgreSQL, and Prisma ORM, implementing secure REST APIs for authentication, product management, cart operations, and order processing.
- Built robust backend with JWT authentication, role-based authorization, product CRUD, dynamic cart updates, stock validation, and order lifecycle handling.
- Integrated React frontend with backend APIs featuring product catalog, search, detail pages, cart, and admin dashboard with image upload via Multer and designed scalable architecture using modular controllers and Prisma migrations.

### Secure Data Wiping and Verification System | *Python, React, Node.js, Express, Supabase*

[GitHub](#)

- Engineered cross-platform desktop application using Python and Tkinter for secure drive erasure with DoD-compliant multi-pass overwrite algorithms, automated disk detection, and cryptographically signed certificate generation.
- Built full-stack web verification portal with React frontend and Node.js/Express backend, integrating Supabase for authentication, license key management, and public certificate verification to ensure erasure authenticity.
- Created end-to-end secure IT asset disposal workflow connecting desktop tool with web platform, generating tamper-proof audit trails (JSON/PDF certificates) to meet data sanitization compliance requirements and improve transparency.