# Ujjwal Kesarwani

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## Education

**Rashtriya Raksha University** — 08/2023 - 08/2027, Gandhinagar, Gujarat

Bachelor of Technology in Computer Science & Engineering | GPA: 7.59/10

- **Relevant Coursework:** Object Oriented Programming, Data Structures And Algorithms, Computer Networks, Database Management System

## Work Experience

**Rashtriya Raksha University** — 01/2025 - 02/2025, Gandhinagar, Gujarat

Development Intern

Technologies: React, Express.js, Node.js, PostgreSQL, Prisma, Docker, NGINX, Recoil, Zod

- Built Full-stack Learning Management System for drone pilot certification
- Architected scalable database infrastructure using PostgreSQL and Prisma ORM, designing schemas for user management, course delivery, and certification tracking
- Secured application architecture through JWT authentication, OTP verification, and role-based authorization, achieving 70% reduction in security vulnerabilities
- Enhanced backend reliability using Zod validation, bcrypt encryption, and structured error handling, improving API stability by 85%
- Optimized user experience with React and Recoil state management, implementing efficient form validation that reduced client-side errors by 40%

**Global Eye Intelligence** — 03/2025 - 04/2025, Gandhinagar, Gujarat

Development Intern

Technologies: Next.js, tRPC, TanStack Query, BetterAuth, Plate.js, PostgreSQL, Prisma, MinIO, Redis, Docker

- Established a robust, type-safe API architecture for a publication platform using tRPC and Prisma ORM, enabling end-to-end type safety that eliminated runtime errors and reduced integration bugs by 40%.
- Engineered secure authentication pipeline using BetterAuth with role-based access control, eliminating 50% of security vulnerabilities
- Optimized database query performance through PostgreSQL indexing and Redis caching, decreasing server response times by 30%
- Enhanced content management using Plate.js integration, supporting real-time collaborative editing for improved user engagement

## Key Projects

**SecretShare** | Live Demo | GitHub — 07/2025

One Time Encrypted Secret Sharing Tool

Technologies: Next.js, Web Crypto API, FastAPI, PostgreSQL, Docker

- Built privacy-first data sharing platform enabling one-time access to sensitive information with automatic link expiration
- Implemented zero-knowledge architecture using Web Crypto API for client-side encryption, ensuring server never accesses plaintext content
- Developed automated cleanup system that permanently destroys data after single access, maintaining 99.9% security compliance
- Architected FastAPI backend with PostgreSQL for metadata management, achieving sub-200ms response times for link validation

**Aisignment** | Live Demo | GitHub — 08/2025

AI-powered Academic Document Generator

Technologies: Next.js, LangChain, LLM

- Engineered end-to-end academic document automation system, reducing assignment creation time by 75% through intelligent PDF generation from user queries
- Developed human-in-the-loop editing interface enabling 3x faster content customization compared to traditional document creation
- Implemented custom template upload feature allowing users to integrate institutional letterheads and cover pages into generated PDFs

**Polygon Annotation Tool** | Live Demo | GitHub — 08/2025

Technologies: Next.js, Tailwind CSS

- Built interactive web-based polygon drawing tool for ML data preprocessing, enabling precise region annotation on uploaded images
- Developed responsive drawing interface supporting multiple polygon creation, editing, and deletion with intuitive click-to-draw functionality
- Engineered coordinate export feature for seamless integration with computer vision training pipelines and dataset preparation workflows

## Achievements & Recognition

- TCS Code Vita Season 12: Secured **global rank 4413 among half million participants**, demonstrating strong algorithmic thinking skills.
- Hackathon Experience: Worked with cross-functional teams in fast-paced environments — developed a MERN-stack hospital management system during a 48-hour CodeArena Hackathon that advanced to the national-level round, and currently serving as team lead in ongoing GenAI Exchange Hackathon and Statathon, actively contributing to problem-solving and collaboration.

## Certifications

- Explore Generative AI with the Vertex AI Gemini API | Google Cloud Skills Boost | Credential URL — 08/2025
  - Skills: Generative AI, Gemini, Python, Vertex AI
- Inspect Rich Documents with Gemini Multimodality and Multimodal RAG | Google Cloud Skills Boost | Credential URL — 08/2025
  - Skills: Multimodality, Retrieval-Augmented Generation (RAG), Python, Vertex AI

## Skills

**Languages:** HTML, CSS, Javascript, Typescript, Python, C/C++

**Frameworks & Libraries:** Node.js, React.js, Express.js, Next.js, Mongoose, Recoil, tRPC, FastAPI, Django, LangChain

**Databases:** MongoDB, PostgreSQL, Redis, MinIO, Chroma DB

**Tools:** Postman, Prisma ORM, Docker, CI/CD, Git, NGINX, Vercel, AWS, LLM, Gemini

## Coding Profiles

- Leet Code
- Code Chef
- Hacker Rank