

MANAV CHOUDHARY

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EDUCATION

Birla Institute of Technology & Science, Pilani

Expected 2027

Bachelor of Science, Computer Science {CGPA: 8.66/10}

Kalinga Institute of Industrial Technology

Expected 2027

Bachelor of Technology, Computer Science & Engineering {CGPA: 8.5/10}

Bhubaneswar, India

Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Operating Systems, Computer Networks, Machine Learning

SKILLS

Languages	Python, TypeScript, JavaScript, C++, SQL
Frontend	React, Next.js (App Router), Tailwind CSS, Radix UI, HTML/CSS, Recharts
Backend & APIs	FastAPI, Node.js, Fastify, RESTful APIs, JWT/NextAuth, RBAC, Redis, BullMQ
Databases	PostgreSQL, Neo4j, Pinecone, Drizzle ORM, SQLAlchemy, Alembic, schema design
Cloud & DevOps	AWS (S3, EC2, ECS, RDS), Vercel, Docker, Linux, Git, GitHub Actions CI/CD
Concepts & Testing	Object-Oriented Design, Design Patterns, Vitest, Playwright, pytest

EXPERIENCE

Software Engineering Intern

August 2025 - Present

Internal Quality Assurance Cell, KIIT University

Bhubaneswar, India

- Digitized the cell's operations end to end, shipping the university's first formal Document Management System and an MoU system holding 700+ agreements dated 2001 to 2026, retiring paper files and manual Excel tracking.
- Delivered and now maintain two production systems used by roughly 8,000 people, owning schema design, REST API development, deployment, and post-release support.
- Consolidated data across 30 schools and 3,000+ faculty and staff into standardized pipelines feeding Times Higher Education, QS, NAAC, and NBA accreditation, ranking, and award submissions.
- Mentored 8 research trainees and ran a 2-month training programme admitting the top 5 of 80+ applicants.

PROJECTS

IQAC Website : University Quality Portal | *Next.js, TypeScript, Drizzle ORM, Neon PostgreSQL, NextAuth.js, Redis, Sentry, Vercel, Cloudflare R2* [Live](#)

- Built and deployed KIIT's official quality assurance portal on serverless infrastructure, serving roughly 8,000 active users at 100 to 200 concurrent sessions with 60-second incremental static regeneration and per pull request preview deploys.
- Modelled 700+ MoUs plus guest, partnership, and contact records into a type-safe relational schema across 5 to 8 document types, behind an admin panel that gives non-technical staff full record control without developer involvement.
- Hardened authentication and abuse handling with bcrypt hashing at 10+ rounds, email verification, CSRF protection, and per-user rate limiting of 10 to 100 requests per minute, against a design target of sub-100 ms p95 queries.

Kortex: AI classification and reporting platform | *FastAPI, Python, PostgreSQL, SQLAlchemy, Google Gemini, Pinecone, Next.js, TypeScript* [GitHub](#)

- Engineered a deployed service classifying institutional records against 17 UN SDGs and 7 national development pillars in 2 to 3 seconds per entry using Pinecone vector retrieval with LLM reasoning, replacing a fully manual mapping process.
- Designed a 3-role RBAC model and 3-state approval workflow with 0.0 to 1.0 confidence scoring and human override, covering 5 entry types at 12 to 15 fields per record.
- Implemented bulk CSV and Excel ingestion with batch classification plus PDF, CSV, and JSON export, architected against targets of 100-entry uploads under 30 seconds and sub-2-second dashboard loads.

LEADERSHIP & PUBLICATIONS

- Cybersecurity Lead, Google Developer Groups on Campus, KIIT:** Founded GDG SecLabs, a 5-masterclass series taking 300+ attendees from Linux fundamentals to the OWASP Top 10.
- IEEE AESPC 2025, peer-reviewed:** *A Machine Learning-Driven Approach to Identify Phytochemical Inhibitors of the P. aeruginosa Quorum-Sensing Regulator LasR*, a CatBoost model validated against molecular docking. [DOI](#)

INTERESTS

Drummer: Trinity College London Grade 7, 10 years, with band-competition wins including IIT Kharagpur Spring Fest. Certified **Tabla** player, Madhyam level.