

Kartikey Pandey

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Professional Summary

Computer Science and Engineering student and Full-Stack Engineer with internship experience developing scalable web applications, backend services, and modular software systems. Proficient in JavaScript and Python, with hands-on experience in REST APIs, authentication, RBAC, database integration, and feature-based architecture. Built AI-driven recruitment, institutional LMS, and explainable machine learning systems. Strong foundation in software engineering, data structures, and system design, with an interest in distributed systems, reliability, and large-scale software development.

Technical Skills

- **Languages** : JavaScript (ES6+), Python, C++, Java
- **Computer Science Fundamentals** : Data Structures and Algorithms, Object-Oriented Programming, Complexity Analysis, Operating Systems
- **Backend and Systems**: Node.js, Express.js, REST APIs, JWT, RBAC, API Design
- **Databases** : PostgreSQL, MongoDB, Database Indexing, Relational Database Concepts
- **Frontend** : React.js, Next.js, React Native, Tailwind CSS, Redux Toolkit
- **AI/ML** : PyTorch, ViT, Swin Transformer, DeiT, XGBoost, SHAP
- **Tools and Deployment**: Git, GitHub, Postman, Vercel, Docker

Professional Experience

Sheryians Private Limited (Bhopal, India)

Nov 2025 – Feb 2026

Worked as a Full Stack Developer Intern

- Architected and developed core modules of a recruitment platform using React 18+, Next.js 14 App Router, Node.js 18+, Express.js, and MongoDB, following feature-based architecture and separation of presentation, business logic, and API services.
- Implemented end-to-end interview scheduling and rescheduling workflows with validation, status transitions, and JobApplication-based data mapping.
- Developed reusable TypeScript interfaces and modular UI components to maintain consistent frontend-backend data contracts and support maintainable feature development.
- Collaborated on backend-integrated workflows, handling API interactions and application data management within the recruitment platform.

Education

Oriental College of Technology, Bhopal

Aug 2023 – Present

B.Tech Computer Science and Engineering

Projects

Radora Next – AI-Powered Institutional LMS (Next.js, React, Node.js, Express, PostgreSQL) next.radora.tech

- Architecting a modular institutional LMS with role-based access, course management, faculty workflows, and academic performance features.
- Developing backend services for attendance and AI-assisted learning workflows, with a focus on structured API design and maintainable service boundaries.
- Designing relational data models and application workflows to support institutional operations across the Radora ecosystem.

Explainable Diagnostic Reliability Framework (EDRF) – Transformer-Based Laryngeal Cancer Detection System (ViT, Swin, DeiT, XGBoost, SHAP, Python) [View](#)

- Designed EDRF (Explainable Diagnostic Reliability Framework), a novel explainability layer for transformer-based laryngeal cancer detection using ViT, Swin, and DeiT as feature extractors with XGBoost classification
- Built the Explainable Diagnostic Reliability Index (EDRI), a 5-component composite score combining SHAP-based explainability, entropy-based cross-architecture consistency, and empirically-weighted expert reliability (via 5-fold CV ROC-AUC, up to 0.9888 AUC)

- Introduced Virtual Diagnostic Experts to simulate independent second-opinion reasoning, improving prediction trustworthiness beyond raw classification accuracy

TrustShield – Blockchain-Based Crypto Wallet Trust Scoring System (React 18, Vite 5, FastAPI 0.103, Python 3.13, Etherscan API v2, HTTPX 0.24, and NLP-based risk analysis models) [Live](#)

- Developed a blockchain intelligence application using React and FastAPI to analyze cryptocurrency wallet activity and generate risk-oriented trust scores.
- Integrated Etherscan API v2 to retrieve and process on-chain wallet data for risk assessment and transaction analysis.
- Applied query optimization to improve the efficiency of wallet data retrieval and processing workflows.

Technical Highlights

- Strong foundation in Data Structures, Algorithms, Object-Oriented Programming, and Operating Systems.
- Experience developing REST APIs and backend services using Python, FastAPI, Node.js, and Express.
- Hands-on experience with PostgreSQL, MongoDB, API integration, data validation, and modular backend architecture.
- Practical experience with Docker, Git, GitHub, and full-stack application development.