

PARAG PATIL

Undergraduate Computer Engineering Student

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Summary

Final-year Computer Engineering student interested in AI/ML, Backend engineering and Software Development, seeking an opportunity to apply technical and problem-solving skills to build innovative, scalable software solutions while gaining industry experience and strengthening software engineering fundamentals.

Education

B.E. Computer Engineering <i>Amrutvahini College of Engineering, Maharashtra</i>	Expected: 2027 <i>CGPA: 9.41 / 10</i>
Higher Secondary Certificate Examination (HSC) <i>Balmohan Higher Secondary School</i>	2022 – 2023 <i>87.83%</i>
Secondary School Certificate Examination(SSC) <i>Pratap Vidya Mandir</i>	2020 – 2021 <i>98.20%</i>

Skills

Programming: Python, Java, Javascript, React, Typescript FastAPI, REST API, SQL

Tools & Tech: MySQL, MongoDB, Git, GitHub, Canva, HTML, CSS.

Software Engineering Abilities: Data Structures & Algorithms (DSA), Object-Oriented Programming (OOP), System Design Basics, Problem-Solving

Experience

Backend Intern <i>22Neuro- Transcend Discoveries pvt Ltd</i>	1st July 2026 – 30th September 2026 <i>Tools Used: Python, FastAPI, REST APIs, Pydantic, SQLAlchemy</i>
- Developed and integrated ECG data ingestion workflows for the NCEP platform, supporting multiple medical file formats and canonical ECG record creation. - Implemented backend functionality using Python and FastAPI for ECG upload, format parsing, metadata extraction, validation, and record management. - Integrated PostgreSQL database operations using SQLAlchemy and Alembic to manage ECG records, ingestion jobs, and report-related data. - Developed and validated report-generation workflows to produce detailed HTML and PDF reports, with artifact management and report-job status handling. - Performed end-to-end testing, debugging, and workflow validation using pytest, Git, and GitHub to identify and resolve issues across ingestion, signal processing, and report generation.	
AI/ML Intern <i>Sumago Infotech Pvt.Ltd</i>	1st January 2026 – 31st January 2026 <i>Tools Used: Python,Pandas,Sci-kit learn,Tensorflow</i>
- Developed an AI-based Image Compression System using Autoencoders for efficient image compression and reconstruction. - Designed and trained encoder-decoder neural network architectures using Python to reduce image dimensionality while preserving image quality. - Performed image preprocessing, feature extraction, and dataset preparation to improve model performance. - Evaluated model effectiveness using reconstruction loss metrics and visual quality analysis. - Optimized model performance through hyperparameter tuning and architecture experimentation. - Utilized Python, NumPy, Matplotlib, and deep learning frameworks to build, train, and analyze the system.	

Projects

Food Supply Chain Blockchain Platform Blockchain(Solidity)	December 2024 – February 2025
Built a decentralized web application to track food supply chain logistics, ensuring transparency from farm to consumer. - Implemented smart contracts to record immutable transactions, reducing chances of fraud and tampering. - Designed a multi-stakeholder blockchain workflow involving farmers, pesticide suppliers, mandi owners, vendors, and consumers for end-to-end traceability. - Enabled consumers to verify product authenticity and organic status through blockchain-backed transaction records.	

- Developed the platform using Solidity, Ethereum, JavaScript, Python, HTML, and CSS for secure and transparent food supply chain management.

KrishiSense: YES-TECH Agri Platform | *Random Forest, XGBoost, LightBGM* **September 2025 – December 2025**

- Developed an AI-powered crop yield estimation system using satellite imagery, weather, and soil data, achieving $R^2 \geq 0.85$ for farm-level yield prediction.
- Implemented SAM-based farm segmentation and crop health analysis, achieving 85%+ segmentation accuracy for automated field assessment.
- Built OCR and blockchain-enabled claim verification workflows with 92%+ document extraction accuracy and API response times below 500ms.

Quiz Central | *React, TypeScript, MongoDB, Node.js, AWS S3, AWS SES, AWS Lambda* **February 2026 – May 2026**

- Developed a full-stack AI-powered quiz platform using Next.js, React, TypeScript, and MongoDB, enabling users to create, manage, and attempt quizzes with personalized learning workflows.
- Integrated Google Gemini with Groq fallback for AI-based quiz generation and AWS Lambda-triggered serverless processing of uploaded study materials to support automated question generation.
- Built an interactive analytics dashboard to track quiz scores, performance trends, and learning progress, helping users evaluate results and identify improvement areas.
- Implemented JWT-based authentication, bcrypt password hashing, AWS S3 for file storage and AWS SES for email workflows; deployed the application on Render.

Awards & Certifications

- **Hackathons & Competitions (2024–2025):** Secured 1st rank at Smart India Hackathon (Team-Graviton PS-SIH25263), Secured 12th rank at Tech Pragyan National Hackathon and 21st rank at CMR National Hackathon, demonstrating strong problem-solving and teamwork skills.
- **Cloud & AI Programs (2025):** Completed Google Cloud Career Launchpad-Generative AI Leader track, Google AI/ML Program, and AWS Generative AI Program covering cloud infrastructure, ML workflows
- **Red Hat Certifications (2024–2025):** Red Hat Certified System Administrator (RHCSA) and Red Hat Certified OpenShift Administrator with hands-on experience in Linux administration, container orchestration, and Kubernetes-based deployments.
- **Research & Publications (2024–2025):** Published 2 research papers in IEEE INDISCON 2025 and IJIRMPS, focusing on Blockchain-enabled Food Traceability and AI-driven Farm-Level Yield Estimation.