

PRADEEP PAL

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Education

Prof. Rajendra Singh (Rajju Bhaiya) University — Prayagraj, UP

Sep. 2024 – present

Bachelor of Computer Applications (BCA)

Uttar Pradesh

Experience

Open Source Developer

Dec 2025 – Present

Multi-Org Contributor (GSoC 2026 Aspirant)

Remote

- Contributing to global open-source organizations including **OpenAstronomy**, **incf**, and **OSIPI**, focusing on backend optimization and UI enhancements.
- Refactored RESTful APIs and improved system performance by **20%** through efficient code maintainability practices.
- Collaborating with international maintainers using Git/GitHub workflows to resolve critical bugs in professional-grade software.

AI Development Workshop

Oct 2025 – Nov 2025

Tenacious Hub Pvt Ltd

Noida, UP (Remote)

- Gained a foundational understanding of Artificial Intelligence architecture and how machine learning models process real-world data.
- Explored AI workflows, including data preprocessing and the logic behind predictive analytics in modern software applications.
- Studied the integration of AI-driven features into full-stack web environments to enhance user experience.

Projects

Sentinel Vault — Honeypot Monitoring System | [Link](#) | *React, Node.js, PostgreSQL*

April 2026

- Architected a **full-stack active defense system** that traps malicious actors by simulating vulnerable endpoints (e.g., `/.env`, `/admin`).
- Implemented a Real-time Threat Dashboard using React and Tailwind CSS to visualize incoming attack vectors and IP metadata.
- Designed a robust PostgreSQL schema to log high-fidelity threat intelligence, capturing IP address, payload, and timestamps.

STDAMS — Satellite Threat Detection System | [Link](#) | *Python, Data Modeling*

Feb. 2026

- Developed an advanced monitoring system designed for **Satellite Telemetry & Abnormal Activity Detection** using simulated datasets.
- Implemented pattern recognition algorithms to identify potential orbital threats and unauthorized signal interference.
- Logic recognized at **UHack 4.0 National Hackathon**, securing a Certificate of Merit for technical innovation.

AI Interview Prep Web | *, AI Integration, Web, Gemini Speech API*

Jan. 2026

- Engineered an AI-driven platform where users can upload resumes and skills to conduct **Mock Technical Interviews** in English.
- Integrated an automated rating system that analyzes user responses and provides detailed feedback on technical accuracy and communication.
- Utilized Speech-to-Text and NLP techniques to simulate a real-world interview environment for career preparation.

Technical Skills

Languages: C++ (Strong DSA), JavaScript, Python, SQL, HTML/CSS

Frameworks/DB: React.js, Node.js, Express.js, PostgreSQL, RESTful APIs, Tailwind CSS

Developer Tools: Git/GitHub, Docker, Kali Linux, VS Code, pgAdmin 4, Google Cloud

Core Concepts: Data Structures & Algorithms, DBMS, Operating Systems, Computer Networks, OOP

Achievements & Certifications

• **UHack 4.0 National Hackathon** | Certificate of Merit for Security Prototype.

Feb. 2026

• **LeetCode Programming** | Solved 20+ problems in C++ (Strong focus on Graph/DP).

Ongoing

• **Computer Fundamentals Quiz** | College-level Trophy Winner (Top 10 Rank).

2025