

Piyush Rajkumar Patil

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SUMMARY

Full-stack engineer and 3rd-year Computer Engineering undergraduate with hands-on expertise in Python, TypeScript, React.js, Node.js, and AWS. Designed and deployed production-grade web applications using MERN and Next.js, serving over 3,000 users, and developed Python-based telemetry and analytics tools. Skilled in REST API design, JWT authentication, Docker, and scalable cloud deployments, with a passion for open-source collaboration.

EDUCATION

Pimpri Chinchwad College of Engineering

Bachelor of Technology, Computer Engineering

• GPA: 8.26/10.0

Aug 2023 - Jun 2027

Pune, India

Vidya Mandir Junior College

Higher Secondary Certificate (HSC)

• Percentage: 79.5

Jun 2021 - Mar 2023

Miraj, India

TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, C, C++
- **Frontend:** React.js, Next.js, TailwindCSS, HTML/CSS, REST APIs, JavaScript Frameworks
- **Backend:** Node.js, Express.js, FastAPI, Flask, JWT Authentication
- **Databases:** MongoDB, MySQL, PostgreSQL
- **Cloud & DevOps:** AWS (S3, EC2), Docker, Linux/Unix, Git, GitHub, Postman, Open Source Contribution
- **AI/ML & Data:** Machine Learning, Computer Vision, Deep Learning, scikit-learn, Data Analysis

WORK EXPERIENCE

Team Anantam Rocketry and Space Research (TARSRPCCOE)

Automation Engineer & Former Web Development Lead

Apr 2024 - Oct 2025

Pune, India

- Developed Narada – a Python-based GUI Ground Station ingesting real-time telemetry from 5+ hardware sensors, displaying flight data graphs, GPS location, and live 3D rocket orientation at 10 Hz refresh rate.
- Built Airavat – a Python-based remote Rocket Motor Testing System capturing thrust and force data from a load cell, generating performance analytics graphs across 8+ test burns.
- Engineered Active Fin Control System and Gyroscope Reaction Wheel stabilization, reducing angular deviation by ~40% in static fire tests.
- Designed and maintained the official team website using React.js and Typescript, leveraging modern JavaScript frameworks, attracting 500+ visitors.

PCCOE ACM Student Chapter

Technical Head

Oct 2024 - Oct 2025

Pune, India

- Led full-stack web development using the MERN stack, designing REST APIs with Express.js and MongoDB, shipping 3+ student-facing applications used by 500+ students.
- Organized 10+ technical workshops and collaborative coding sessions, mentoring 100+ student members on web development, JavaScript frameworks, and open source contribution.

Pimpri Chinchwad College of Engineering

In-House Software Engineering Intern

Dec 2025 - Jan 2026

Pune, India

- Built UniSphere, a production-grade MERN + Next.js college event management platform onboarding 3,000+ students across 50+ clubs with role-based access control and automated workflows.
- Implemented JWT authentication, rotating QR attendance system, and real-time analytics dashboards using Next.js and Tailwind CSS –reducing manual admin effort by 70% and eliminating proxy attendance.
- Deployed backend APIs handling 500+ concurrent requests in Docker containers, with MongoDB Atlas for persistent storage.

PROJECTS

UniSphere | [Live](#)

2025 - Present

- Architected a centralized event management platform using React.js, Tailwind CSS, Node.js/Express and MongoDB to serve 3,000+ users, handling events, registrations, attendance, budgets, and inter-club communication for 50+ clubs.
- Built a Smart Attendance System using dynamic rotating QR codes, reducing proxy attendance to 0% across 30+ university events.
- Developed 3-tier role dashboards (Student, Club Admin, Super Admin) with Next.js frontend and FastAPI backend, leveraging WebSocket for real-time analytics and automated certificate generation to cut administrative workload by 70%.

- Developed a smart agriculture platform serving 1,000+ farmers with AI-driven crop recommendations (89% accuracy) and plant disease detection using a scikit-learn ML pipeline on uploaded images.
- Integrated real-time weather API and live market price feeds using a TypeScript-enabled Express.js backend and Axios, enabling data-driven decisions across 15+ crop varieties with sub-2s inference response time.
- Containerized Flask ML microservices with Docker on AWS EC2 and set up CI/CD pipelines via GitHub Actions, connecting to a React.js frontend to reduce farmer decision time by 50%.

Prescripto

2025

- Developed a full-stack hospital appointment booking system with JWT-secured role-based authentication for 500+ patients and 50+ doctors.
- Integrated a secure payment gateway processing 100+ daily bookings, reducing appointment scheduling time by 60% and eliminating manual queue management.
- Designed responsive, real-time dashboards for appointment tracking and doctor availability, achieving sub-1s load times via optimized MongoDB queries.

ACHIEVEMENTS & CERTIFICATIONS

- **Competitive Programming:** HackerRank 5-Star (C & C++), CodeChef 2-Star, Completed GFG 160-Day DSA Challenge; CoCubes Score: 602/800
- **Honors:** 1st Prize – ML Mania Hackathon; 2nd Runner-Up – IEEE Ideathon; Smart India Hackathon (SIH) Participant
- **Community & Open Source:** Active contributor via PCCOE ACM Chapter; maintains public GitHub repositories used by peers for learning and collaboration.

CERTIFICATION

- CS50 Introduction to Computer Science (Harvard University)
- McKinsey Forward Program
- Data Structures in C++ (Scaler)
- Data Analysis with Python (FreeCodeCamp)
- Introduction to Data Mining (Simplilearn)