

# Sumit Pradeep Kolpe

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## OBJECTIVE

Award-winning AI Researcher and Data Scientist, aiming to pursue an MS in Data Science to gain advanced expertise in machine learning, deep learning, and ethical AI systems. Passionate about developing data-driven and human-centred AI frameworks that optimize decision-making, enhance automation, and drive innovation. Aspiring to contribute as an AI Research Scientist in a professional setting by designing scalable, responsible, and high-impact AI solutions that improve organizational efficiency and address real-world societal challenges.

## EDUCATION

**Savitribai Phule Pune University (MMCOE, Pune, India)**

Oct 2022 – June 2026

Bachelor of Engineering in Artificial Intelligence & Data Science

CGPA: 9.52/10

## ACADEMIC PROJECTS

**Saheli:** AI-Powered Women's Safety Platform [MMCOE, Pune]

Jan 2024 – Sep 2025

Team Size: 4

**Role:** Lead Researcher & NLP Developer

- Devised a multimodal AI system to detect distress from voice and text and trigger silent emergency alerts.
- Implemented privacy-preserving real-time location sharing and secure alert pipelines to protect user data.
- Trained and optimized NLP and classification models using Python and TensorFlow, improving detection accuracy by 20% over baseline and reducing average emergency response time to under 3 seconds.

**FitMantra:** AI-Based Virtual Gym Trainer [MMCOE, Pune]

Jan 2023 – May 2024

Team Size: 7

**Role:** Team Leader & Computer Vision Engineer

- Engineered a computer-vision posture-correction system using OpenCV and TensorFlow to provide real-time corrective feedback.
- Integrated gamified progress tracking and community leaderboards to boost user engagement.
- Optimized pose-estimation pipelines and evaluation metrics, achieving an approximate 60% reduction in posture errors during testing.

## INTERNSHIPS

**International Research Intern, Avignon University, France**

June 2025 – July 2025

- Led the development of a digital twin simulation for 5G/6G wireless networks to evaluate real-time behaviour under DoS attacks.
- Implemented AI-based anomaly detection to strengthen network resilience and optimize defence response time.
- Explored the role of Reconfigurable Intelligent Surfaces (RIS) and ethical AI policies for secure network governance.

**AI Practitioner Intern, Infosys, Pune India**

May 2024 – July 2024

- Developed and deployed time-series forecasting models for demand prediction in e-commerce, boosting accuracy by 25%.
- Optimized model interpretability and explainability to align with Infosys's ethical AI guidelines.
- Collaborated with cross-functional data teams to improve forecasting pipelines and streamline business decision-making.

**Data Scientist Intern, Sponsorlytix, United Kingdom**

Nov 2022 – Dec 2022

- Pre-processed and ethically annotated large-scale visual datasets to improve computer vision model robustness.
- Applied ML techniques to extract actionable insights for sports and health analytics, enhancing accuracy by 40%.

## TECHNICAL SKILLS

- Programming Languages:** Python (3 yrs), C++ (2yrs), SQL (2 yrs).
- Machine Learning & AI:** TensorFlow (2 yrs), PyTorch (1.5 yrs), Scikit-learn (3 yrs), OpenCV (2 yrs).
- Data Science & Analytics:** Feature Engineering (3 yrs), Data Cleaning (3 yrs), NLP (2 yrs).
- Database Systems:** MySQL (2 yrs), PostgreSQL (1.5 yrs), MongoDB (1 yr).
- Tools & Libraries:** Pandas, NumPy, Matplotlib, Git, Jupyter Notebook, VS Code.

## **CERTIFICATIONS & WORKSHOPS**

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|---|------|
| ● Oracle Cloud Infrastructure 2025 Data Science Professional: Oracle University (Online)        | 2025 |
| ● Research Symposium on AI Governance & Security: IIT Bombay, India (Offline)                   | 2025 |
| ● Oracle Cloud Infrastructure, Generative AI Certified Professional: Oracle University (Online) | 2024 |
| ● Microsoft Fabric Analytics Engineer Associate: Microsoft Learn (Online)                       | 2024 |
| ● Machine Learning for Data Science: IBM Cognitive Class (Online)                               | 2024 |
| ● Applications of Machine Learning in Urban Studies: Indian Space Research Organisation (ISRO)  | 2023 |

## **PUBLICATIONS**

- S. P. Kolpe, “An IoT-Based Smart Fitness Solution (FitMantra),” Indian Patent Application No. 202421004780, Published Feb. 2024. (Verifiable at: [Intellectual Property India](#))
- S. P. Kolpe, A. Benslimane, “RIS-Assisted Secure 6G Communication Using Intelligent Beam Reconfiguration,” (Manuscript in preparation), Avignon University, France, 2025.
- S. P. Kolpe, “Deep Learning for Women’s Safety: A Smart Emergency Detection System,” (Manuscript under review), 2025.

## **ACHIEVEMENTS**

- Aegis Graham Bell Award 2025, Ministry of Electronics & IT, Government of India.
- GATE Exam 2025 - Qualified in First Attempt (Top 10% Rank among 57054 Candidates Nationwide).
- Best AI Tech Award 2024, Infosys India.
- Best Innovator of Maharashtra recognition from Ministry of Education during Innovation, Design & Entrepreneurship Bootcamp 2024.
- Represented India at the International Hackathon 2024, Slovakia (Europe) – Selected among 30 global finalist teams representing 30 countries.
- International Hackathon 2024 Pune, Maharashtra, 1st Prize for AI- based Virtual Gym Trainer Project.
- PAN IIT National Hackathon 2023– 3rd Rank for AI for Women's Safety Project.
- State-Level Hackathon 2024– 2nd Prize for AI- based Virtual Gym Trainer Project.

## **LEADERSHIP ROLES**

**President – NEURA: AI & Tech Club – MMCOE, Pune** 2024- 2025

- Led a community of 130+ students fostering research and innovation in AI and Data Science.
- Organized 3 major campus events, enhancing interdisciplinary collaboration and technical engagement.

**Design Thinking & Innovation Mentor – MMCOE, Pune** 2024-2025

- Guided 100+ student teams in developing AI-based solutions for healthcare, safety, and sustainability.
- Structured innovation workshops to promote ethics-driven design and responsible AI thinking.

## **COMMUNITY INVOLVEMENT**

**National Service Scheme (NSS) Volunteer – MMCOE, Pune** 2023 – 2025

- Organized digital literacy and education drives across rural schools, impacting over 300 students.
- Assisted in health awareness campaigns and environmental clean-up programs benefiting 500+ community members.

**Orphanage & Elder Care Volunteering – Pune Region** 2023 – 2024

- Supported education and recreational programs at local orphanages, benefiting 50+ children.
- Initiated weekend learning sessions in basic computer literacy and STEM awareness for underprivileged youth.