

Priyanka Magar-Sawant

PhD, Indian Institute of Technology Bombay

Mathematician · Aerospace and UAV Innovation

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Professional Summary

PhD Mathematician with a specialized evolution from theoretical research in manifold theory to building practical models for the aerospace industry. Currently focused on Log Data Analysis and mathematical modeling to enhance UAV autonomous technologies.

Experience

Raphe mPhibr	Noida
Mathematician	Sept 2025 – Present
Aerospace & Defense R&D: Specializing in UAV geometries and Log Data Analysis.	
IIT Madras	Chennai
Research Associate	July 2024 – Feb 2025
Advanced postdoctoral research in topological complexity and robotics applications.	
IIT Bombay	Mumbai
Research Associate	May 2024 – June 2024
Academic assistance in Calculus, Linear Algebra, and Differential Equations.	

Education

Indian Institute of Technology Bombay	
Ph.D. in Mathematics	2018 – 2024
Thesis: Smooth structures on PL-manifolds of dimensions between 8 and 10.	
University of Pune	Pune
M.Sc. Mathematics	2015 – 2017
GPA: 8.05	
S.P. College	Pune
B.Sc. Mathematics	2012 – 2015
Percentage: 87.25%	

Technical Skills & Certifications

Languages: Python, MATLAB, L^AT_EX, Git, Linux.

Tools: Ardupilot Filter Review, MAGFit, Log Data Analysis.

Certification: Machine Learning Specialization – DeepLearning.AI & Stanford University (2025).

Selected Publications

2024: P. Magar-Sawant, "Concordance structure set of connected sum of projective spaces," *Proceedings-Mathematical Sciences*.

2024: S. Basu, R. Kasilingam, P. Magar-Sawant, "Smooth structures on PL-manifolds of dimensions 8-10," *arXiv:2302.02301*.

Selected International Conferences

Aug 2024: Young Topologists Meet, Munster, Germany.

July 2023: International Conference on Topology, Nafpaktos, Greece.