

K.T.S.P. MANDAL'S

HUTUTMA RAJGURU MAHAVIDYALAYA, RAJGURUNAGAR

TAL-KHED, DIST-PUNE 410 505

DEPARTMENT OF MATHEMATICS AND STATISTICS

GUEST LECTURE

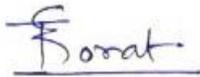
Sr.No.	Particulars	Details
1	Date	08/04/2025
2	Name of the event	Guest Lecture
3	Duration of the programme	1 Day
4	Venue	Hutatma Rajguru Mahavidyalaya, Rajgurunagar
5	Name of coordinator	Prof. R. M. Wayal
6	Number of Participants	15
7	Activity belongs to which criteria	Criteria II
8	Curricular/Co-Curricular/Extra-Curricular	Co-Curricular

The Department of Mathematics organized a guest lecture for S.Y.B.Sc. students on the topic “Applications of Mathematics in Artificial Intelligence”. The lecture was delivered by Prof. Rahul Sahane, Shri Shiv Chhatrapati College, Junnar who shared his knowledge and experience on how mathematics plays a vital role in the development of Artificial Intelligence. The session was conducted with the objective of making undergraduate students aware of the practical importance of mathematics in modern technologies and encouraging them to pursue interdisciplinary learning. Prof. Rahul Sahane began the lecture by introducing the concept of

Artificial Intelligence and its increasing use in various fields such as healthcare, finance, education, and information technology. He emphasized that mathematics forms the backbone of AI and is essential for building intelligent systems. He explained that without a strong mathematical foundation, it is difficult to understand or develop AI-based models.

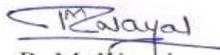
During the lecture, the speaker discussed the application of linear algebra in Artificial Intelligence, particularly in data representation, vectors, matrices, and neural networks. He explained how matrices are used to handle large amounts of data and how mathematical transformations help machines recognize patterns. He also highlighted the importance of probability and statistics in AI for data analysis, prediction, and decision-making. Concepts such as probability distributions, mean, variance, and statistical inference were explained with reference to real-life applications like recommendation systems and predictive models. Prof. Sahane further elaborated on the role of calculus in optimization techniques used in machine learning. He explained how differential calculus and gradient descent methods are used to minimize errors and improve the accuracy of AI models. He also briefly introduced the relevance of discrete mathematics and algorithms in logical reasoning, problem-solving, and efficient computation within AI systems. The session was interactive and engaging, with students actively participating and asking questions related to Artificial Intelligence, required skills, and career opportunities in the field. Prof. Rahul Sahane answered the questions patiently and motivated students to strengthen their mathematical fundamentals to pursue higher studies and careers in AI, data science, and related areas.

The guest lecture proved to be highly informative and beneficial for S.Y.B.Sc. students as it clearly connected theoretical mathematical concepts with practical applications in Artificial Intelligence. The lecture inspired students to appreciate the importance of mathematics in modern technology. The Department of Mathematics expressed its sincere gratitude to Prof. Rahul Sahane for delivering such an insightful and motivating lecture.



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