

## PRAGATI ENGINEERING COLLEGE

## (AUTONOMOUS)

## DEPARTMENT OF CSE (DATA SCIENCE)

### DATA ANALYTICS CLUB

11-09-2025

### A Report on the Data Analytics Club Activity

As part of the technical activities under the Data Analytics Club of the Department of CSE (Data Science), this event was conducted.

Name of the Event: Technical Seminar

Name of the Topic: The Role of Machine Learning in Data Science

Name of the Speaker: P. AKSHAY KUMAR (23A31A44G4)

Date of the Event: 11-09-2025

Time of the Event: 11:00 AM to 12:00 PM

Venue of the Event: CF-7 (Tech Block)

A total of 56 students attended this event. All the students actively participated and engaged with great enthusiasm.

#### Brief Write-up of the Event:

The seminar started with a warm welcome and quickly engaged the students by explaining why Machine Learning is an essential part of modern Data Science. The speaker highlighted how ML drives predictive analytics, automation, and pattern recognition in data-driven fields.

The session was structured into five major parts for better understanding:

Part1: The 'Why' - A discussion on ML's role in Data Science and its impact on industry trends.

Part2: The 'What'—Clarifying the difference between Artificial Intelligence (AI) and Machine Learning (ML).

Part3: The 'How'—An introduction to essential Python libraries like NumPy, Pandas, and Scikit-learn.



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Part4: Let's Build — A practical walkthrough of building a KNN classifier using a movie genre filtering example.

Part5: What's Next— A roadmap for exploring advanced ML techniques and potential project ideas.

The seminar was interactive, with students participating in discussions and gaining exposure to real-world examples of how ML models are built and deployed.

## HIGHLIGHTS AND KEY TAKEAWAYS:

- Understanding ML's significance in the data science lifecycle
- Differentiating AI and ML with clear examples
- Familiarity with key Python libraries for ML
- Step-by-step walkthrough of a KNN classifier
- Inspiration to explore projects and research in ML

#### **POST-EVENT FEEDBACK:**

The session was appreciated by the students. They found the hands-on demonstration and conceptual explanations very helpful. Most participants rated the session as Good and expressed interest in conducting more practical ML workshops in the future.

#### Questions Raised by Students:

- How do we select the best ML algorithm for a dataset?
- What are the limitations of KNN and when should we use other models?
- How can we apply ML to solve real-world problems?
- What are some beginner-friendly ML projects to start with?



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# PHOTOGRAPHS FROM THE EVENT:









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