FACULTY DEVELOPMENT PROGRAM REPORT

Applications in Artificial Intelligence

27th January 2026 – 31st January 2026
Time: 2:00 PM – 4:00 PM
Venue: St. Joseph's College for Women (Autonomous)
Resource Persons: Faculty of Computer Science

1. Introduction

The Department of Computer Science, St. Joseph's College for Women (Autonomous), organized a Five-Day Faculty Development Program (FDP) on 'Applications in Artificial Intelligence' from 27th January 2026 to 31st January 2026 between 2:00 PM and 4:00 PM. The objective of the program was to enhance faculty knowledge in Artificial Intelligence (AI), provide hands-on experience with AI tools, and explore interdisciplinary applications of AI.

2. Objectives of the Program

- To introduce faculty to fundamental concepts of Artificial Intelligence and Machine Learning.
- To provide practical exposure to AI tools and platforms.
- To demonstrate interdisciplinary applications of AI.
- To create awareness about ethical issues and bias in AI systems.
- To encourage integration of AI concepts into teaching and research.

3. Day-wise Report

Day 1: Introduction to AI & Data Handling (27-01-2026)

The inaugural session began with a welcome address followed by an introduction to Artificial Intelligence, Machine Learning, and Data Science.

The session introduced Artificial Intelligence, Machine Learning, and Data Science concepts. Participants explored public datasets, understood CSV and JSON formats, performed data cleaning using Orange Data Mining, and learned train-test split techniques.

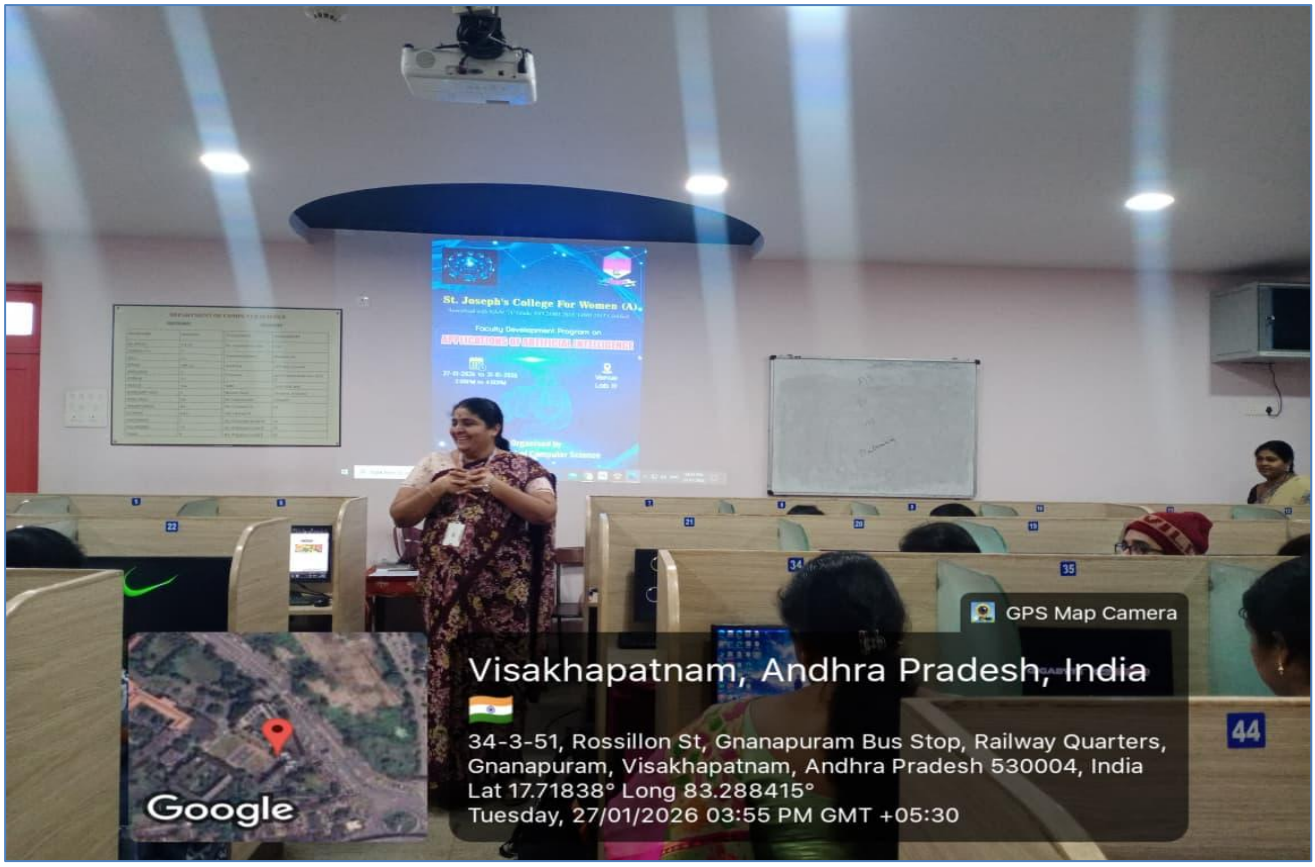
Key Activities:

- Exploring public datasets (Kaggle, UCI, data.gov.in)
- Understanding CSV and JSON formats
- Dataset metadata analysis
- Data cleaning and preprocessing using Orange Data Mining
- Train/Test split concepts
- Introduction to AI in agriculture (Plant disease detection & crop yield prediction)

Outcome:

Participants gained understanding of:

- Structured datasets
- Data preprocessing techniques
- Importance of clean data in AI model building



Day 2: AI in Commerce & Management (28-01-2026)

The focus was on business applications such as customer segmentation, recommendation systems, chatbot intent classification, sentiment analysis, demand forecasting, bias detection, and predictive analytics for customer churn.

The second day focused on real-world AI applications in business and commerce.

Key Activities:

- Customer segmentation using clustering
- Recommendation system simulation
- Chatbot intent classification
- Sentiment analysis of product reviews
- Demand forecasting using regression
- Bias detection in AI models
- Predictive analytics for churn prediction

Outcome:

Faculty members understood:

- How AI supports business intelligence
- Customer behavior analysis
- Ethical concerns and bias in AI models

Day 3: AI in Humanities & Social Sciences (29-01-2026)

Participants explored AI applications in socio-economic data analysis, text classification, word cloud generation, language translation, summarization, chatbot interactions, and AI-based creative content generation.

Day 3 highlighted interdisciplinary applications of AI beyond computer science.

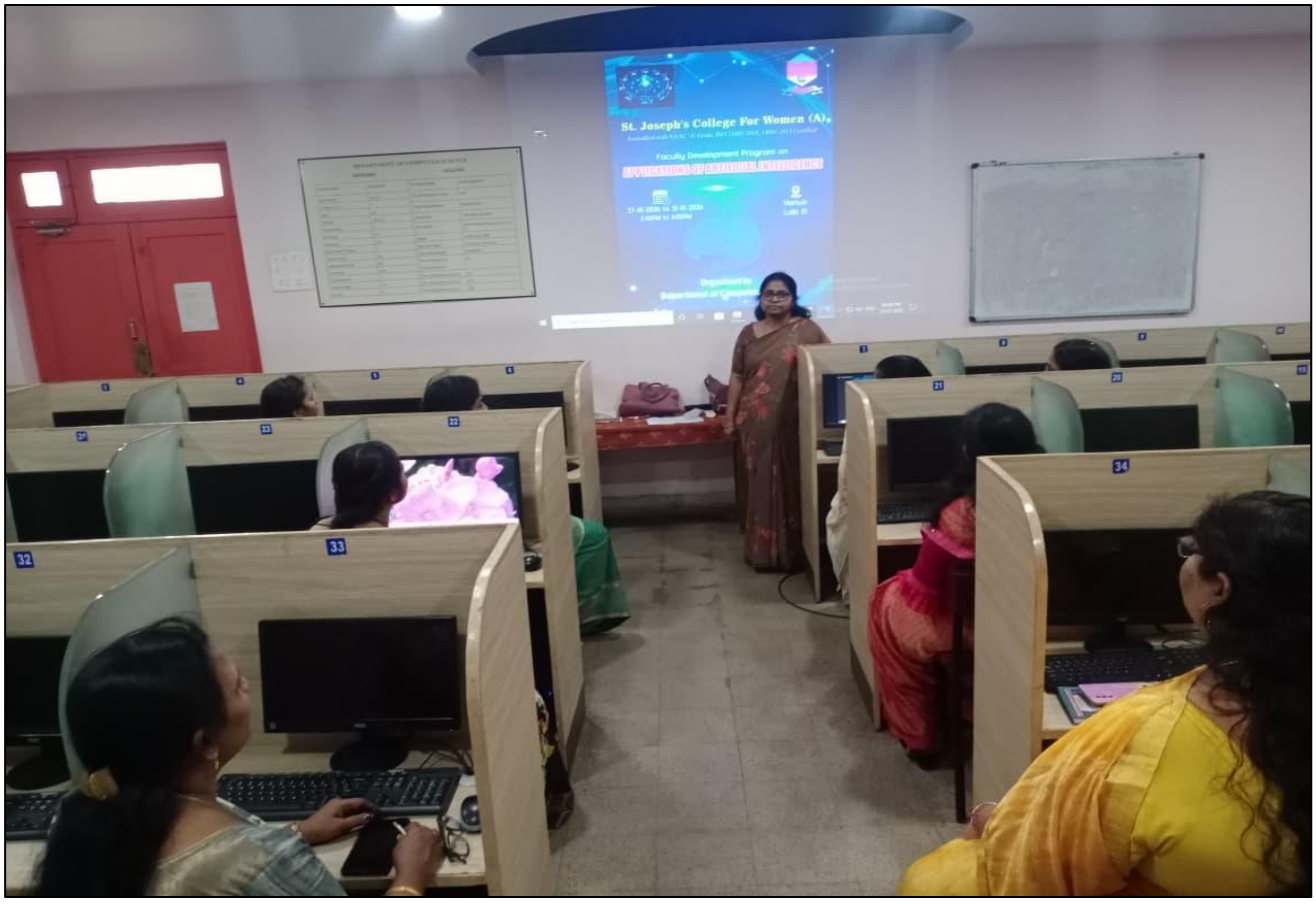
Key Activities:

- Socio-economic data analysis (World Bank indicators)
- Named Entity Recognition (NER)
- Sentiment classification
- Word cloud generation for speeches
- Bias detection in job advertisements
- Language translation & summarization tools
- AI chatbot interaction & creative story generation
- AI art and music generation

Outcome:

Participants realized:

- AI's impact on sociology, linguistics, and literature
- Strengths and limitations of AI in language processing
- Creative capabilities of generative AI



Day 4: AI in Science, Engineering & Cybersecurity (30-01-2026)

This session covered scientific dataset exploration, climate and earthquake data analysis, chemical compound classification, symbolic mathematics solvers, remote sensing datasets, cybersecurity data analysis, prompt engineering, AI-assisted web development, and automation tools.

This session focused on scientific datasets and advanced AI applications.

Key Activities:

- Scientific dataset exploration (Earthquake, Climate, Materials data)
- Chemical compound classification
- Symbolic mathematics solvers
- Remote sensing datasets
- Cybersecurity dataset analysis
- Prompt engineering for generative AI
- AI-assisted website & quiz app development
- Automation using AI tools (n8n & Google Sheets AI functions)
- Deepfake image detection

Outcome:

Faculty learned:

- AI applications in Earth sciences, chemistry, and mathematics
- Role of AI in cybersecurity
- Automation and workflow integration using AI

Day 5: Advanced AI Tools & Valedictory Session (31-01-2026)

The final day emphasized model evaluation techniques, fairness and responsible AI, integration of AI in higher education, interactive discussions, participant feedback, certificate distribution, and the vote of thanks.

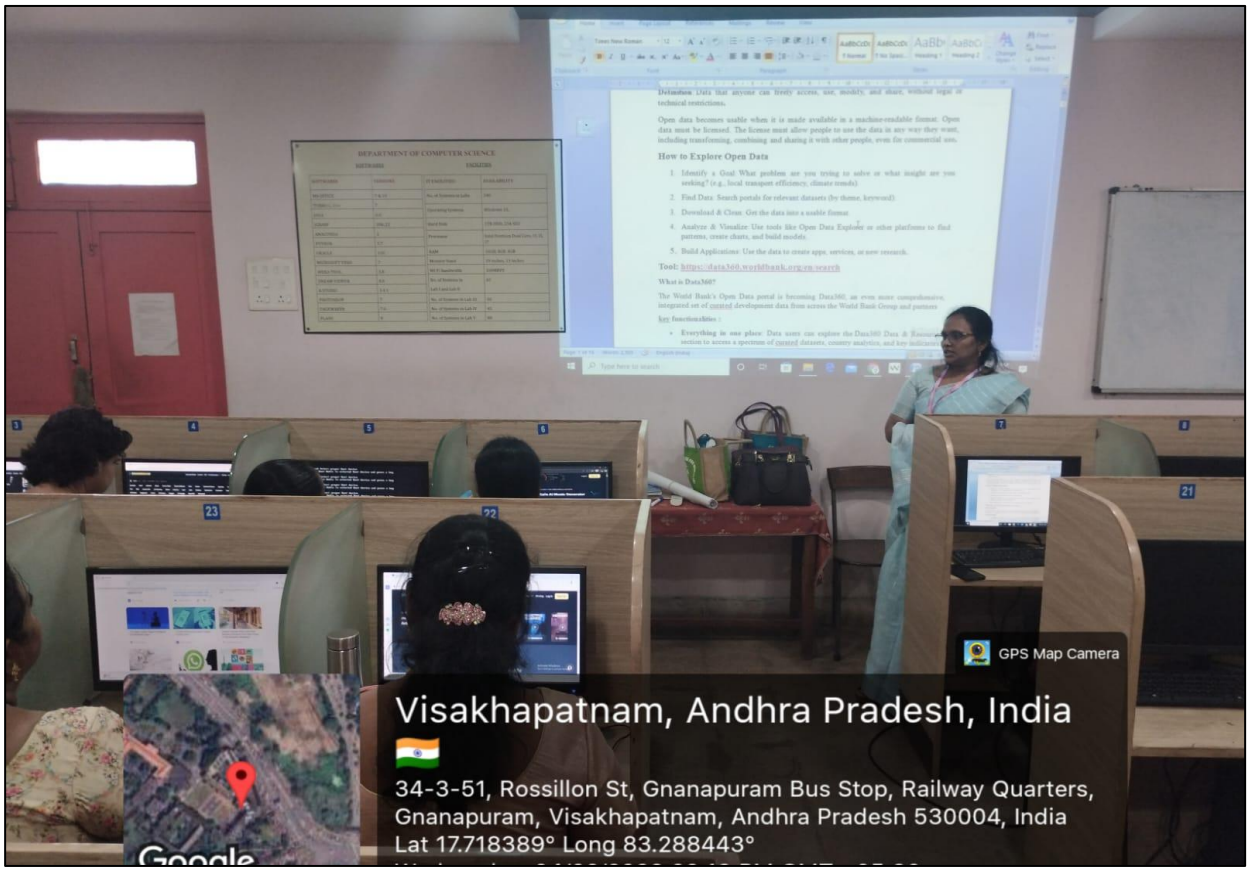
The final day emphasized advanced tools, ethical AI, and future opportunities.

Key Highlights:

- AI model evaluation techniques
- Fairness, transparency, and responsible AI
- Discussion on AI in higher education
- Interactive Q&A session
- Feedback collection and reflection

Valedictory Session:

- Participants shared experiences
- Vote of thanks delivered by the organizing committee
-



4. Outcomes of the Program

- Enhanced faculty awareness of AI applications across disciplines.
- Hands-on exposure to AI tools and data analysis platforms.
- Understanding of ethical considerations and bias in AI models.
- Encouragement to integrate AI concepts into curriculum and research.

5. Conclusion

The Five-Day Faculty Development Program on 'Applications in Artificial Intelligence' was successfully conducted at St. Joseph's College for Women (Autonomous). The program effectively combined theoretical knowledge with practical exposure, empowering faculty members to adopt AI tools in teaching and research. The initiative marked a significant step toward strengthening AI integration in higher education.

Program Coordinator

Head, Department of Computer Science

St. Joseph's College for Women (Autonomous)

Principal