

National Level Summer Internship on
“NextGen AI: Emerging Trends and Applications”.

Course Name: National Level Summer Internship on “Next Gen AI: Emerging Trends and Applications”.

Organized By: Computer Applications & Computer Science Department in association with Data8X solutions.

Duration: The duration of the Summer Internship Course is One Month (30 Days or 100 Hrs).

- Offline Mode: 15 Days
- Online Mode: 15 Days

Expected Date: 15-06-2026 to 14-07-2026

Objectives of the Course

1. To introduce the fundamentals of Artificial Intelligence.
2. To provide hands-on experience with AI tools and technologies.
3. To develop problem-solving and analytical skills using AI.
4. To enhance programming and project development skills.
5. To create awareness about emerging trends in Next Gen AI.

Outcomes of the Course

1. Understand basic concepts of AI and Machine Learning.
2. Develop simple AI-based applications and projects.
3. Use modern AI tools and frameworks effectively.
4. Apply AI techniques to solve real-world problems.
5. Improve technical, communication, and teamwork skills.

Topic Breakdown :

Module 1: Fundamentals of Artificial Intelligence

- Introduction to AI
- History and Evolution of AI
- Types and Applications of AI
- Future Scope of AI

Module 2: Python Programming for AI

- Basics of Python
- Data Types and Functions
- Libraries for AI
- Introduction to Google Colab and Jupyter Notebook

Module 3: Data Handling and Visualization

- Data Collection Techniques
- Data Cleaning and Preprocessing
- NumPy and Pandas
- Data Visualization using Matplotlib

Module 4: Machine Learning Basics

- Introduction to Machine Learning
- Supervised Learning
- Unsupervised Learning
- Classification and Regression

Module 5: Deep Learning Fundamentals

- Neural Networks
- Deep Learning Concepts
- Introduction to TensorFlow
- AI Model Training and Testing

Module 6: Generative AI

- Introduction to Generative AI
- Large Language Models (LLMs)
- AI Content Generation
- Prompt Engineering Techniques

Module 7: Agentic AI and Intelligent Systems

- Introduction to Agentic AI
- Autonomous AI Agents
- Multi-Agent Systems
- AI Decision-Making Systems

Module 8: Edge AI and Smart Applications

- Introduction to Edge AI
- AI in IoT Devices
- Real-Time AI Processing
- Smart AI Applications

Module 9: AI Development and Deployment

- AI APIs and Tools
- Cloud AI Platforms
- AI Chatbot Development
- AI-based Project Development

Module 10: AI Ethics and Future Trends

- Ethical AI and Responsible AI
- AI Security and Privacy
- Explainable AI (XAI)
- Future Trends and Career Opportunities in AI