SLIDESGO

Your lesson plan

Unit 2: History of AI and ML Overview of artificial intelligence (AI) and machine learning (ML) evolution Key milestones: Turing Test, early neural networks, and modern AI advancements Major contributors/breakthroughs in AI/ML research Impact of advanceme

Lesson Objectives

By the end of this lesson, students will be able to:
- Understand the historical evolution of Artificial Intelligence and Machine Learning
- Identify key milestones and pivotal moments in AI development
- Recognize major contributors to AI and ML research
- Analyze the societal and technological impact of AI advancements

Course Materials

- Computer or projector for presentations
- Historical timeline printouts
- Video clips of AI milestones
- Research articles on AI pioneers
- Optional: Interactive digital timeline tool
- Recommended readings on AI history

Historical Overview (60 minutes)

1. Early Foundations (1940s-1950s):
- Alan Turing and the Turing Test
- First neural network models
- Dartmouth Conference (1956) - Birth of AI as a field

2. AI Winter and Resurgence (1970s-1990s):
- Limitations of early AI approaches
- Expert systems
- Renewed interest with increased computational power

3. Modern AI Breakthroughs (2000s-Present):
- Machine learning and deep learning
- Neural network advancements
- Key achievements: AlphaGo, GPT models, image recognition

Key Pioneers and Contributions

- Alan Turing: Turing Test, computational theory
- John McCarthy: Coined 'Artificial Intelligence'
- Marvin Minsky: Neural network research
- Geoffrey Hinton: Deep learning pioneer
- Yann LeCun: Convolutional neural networks
- Andrew Ng: Machine learning scalability

Interactive Learning Activity

Group Project: AI Timeline Creation
- Students will work in groups to create a digital or physical timeline
- Each group focuses on a specific era of AI development

- Presentation of research findings
- Critical analysis of technological progression
- Discuss social and ethical implications of each milestone

Assessment Strategies

1. Group Timeline Presentation (40%)
2. Individual Research Paper on an AI Pioneer (30%)
3. Class Participation and Discussion (20%)
4. Reflection Essay on AI's Societal Impact (10%)

Additional Assessment Options:
- Online quiz on key AI milestones
- Debate on ethical considerations of AI advancement

Adaptability for Different Learning Environments

In-Person Class:
- Physical group work
- Direct discussions
- Hands-on timeline creation

Additional Resources

- 'Artificial Intelligence: A Modern Approach' by Russell and Norvig
- MIT OpenCourseWare AI lectures
- TED Talks on AI history
- IEEE Spectrum AI research articles
- Online documentaries about AI development