

Emerging Technologies

Deep Learning Specialization

Curriculum

Program Outline :

Module 1: Fundamentals of Deep Learning

1. Introduction to Deep Learning

- Core principles, tools, and industry applications.

2. Basics of Neural Networks

- Understanding and implementing basic neural networks.

3. Introduction to Deep Learning Concepts

- Overview of advanced deep learning techniques.

4. Python Programming for Deep Learning

- Python syntax, data handling, and essential libraries.

Module 2: Advanced Analytical Tools

5. Advanced Deep Learning Techniques

- Reinforcement learning, generative adversarial networks.

6. Data Visualization for AI

- Creating interactive visualizations and dashboards.

7. AI Ethics and Privacy

- Ethical considerations, privacy laws, compliance strategies.

8. Intermediate Python for Deep Learning

- Using advanced libraries for AI development.

Module 3: Practical Applications

9. Data Cleaning and Preprocessing

- Techniques for ensuring data quality and reliability.

10. Exploratory Data Analysis (EDA) for AI

- Analyzing data distributions, identifying patterns.

11. Advanced Data Integration Techniques

- Integrating data from multiple sources.

12. Building Deep Learning Models

- Implementing and optimizing deep learning models.

Module 4: Capstone Project

13. Integration of Learned Skills

- Apply tools and techniques to real-world AI problems.

14. Advanced Natural Language Processing (NLP)

- Text analysis, sentiment analysis, topic modeling.

15. Computer Vision Techniques

- Object detection, image classification, deep learning for CV.

16. Specialized Deep Learning Applications

- Developing AI for specific industry applications.

Elective Modules

17. Predictive Analytics with Deep Learning

- Building and validating predictive AI models.

18. AI in Healthcare

- Applying AI techniques to healthcare data and problems.

19. AI for Finance

- Implementing AI solutions in financial services.

20. Big Data Technologies for AI

- Using Hadoop and Spark for large-scale AI applications.

21. AI-Driven Decision Making

- Using AI to inform and drive business strategies.

22. Cloud AI Solutions

- Deploying AI models and services on cloud platforms.

23. AI Project Management

- Leading AI projects, ensuring successful delivery.

24. Reinforcement Learning Applications

- Advanced techniques and applications of reinforcement learning.

25. AI for Natural Language Processing (NLP)

- Advanced text analytics and processing techniques.

Websites:

- <https://chools.in/>
- <https://ramaqchools.com/>
- <https://www.choolsgroup.com/>