AI & Data Science with Machine Learning

Master Artificial Intelligence, Machine Learning, Deep Learning, NLP, and Data Science with real-world projects, modern tools, and industry workflows.

✔ **Beginner Friendly** Step-by-step learning path	✔ **Hands-on Projects** Real-world implementation
✔ **Industry Tools** Python, TensorFlow, Pandas	✔ **Capstone Project** Build complete AI solutions

Curriculum Roadmap

1. Introduction to Machine Learning	• What is ML? • AI vs Traditional Programming • Real-world applications • Basic ML demo
2. ML Concepts & Framework	• Supervised & Unsupervised ML • Features & Labels • Recommendation systems
3. ML Workflow	• Data Collection • Model Development • Evaluation Techniques
4. Environment Setup	• Anaconda • Jupyter Notebook • Libraries Overview
5. NumPy & Data Analysis	• Arrays • Operations • Numerical Analysis
6. Pandas & Data Exploration	• DataFrames • Filtering • Cleaning Data
7. Data Visualization	• Graphs • Matplotlib • Dashboards
8. Machine Learning Models	• Scikit-learn • Classification • Predictions

9. Model Evaluation	• Accuracy • Cross-validation • Optimization
10. ML Project	• Hands-on Classification Project
11. Kaggle & Datasets	• Competitions • Real-world datasets
12. Deep Learning	• Neural Networks • TensorFlow • Image Models
13. Optimization	• Training • Batch Processing • Performance Tuning
14. NLP	• Text Processing • Sentiment Analysis • Classification
15. Advanced AI	• Transformers • Embeddings • Generative AI
16. NLP Projects	• Spam Detection • Text Summarizer
17. Capstone Project	• Build & Present Complete AI Solution

Career Outcomes

- Build AI-powered applications and recommendation systems
- Analyze and visualize large datasets
- Create Machine Learning and NLP models
- Work on real-world AI projects using modern frameworks
- Prepare for careers in AI, ML, and Data Science

Learn • Build • Innovate • Transform with AI