

NS3 CAREER: AI AND MACHINE LEARNING



**WELCOME TO
NS3GROUP**

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FOUNDERS



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VISION

“To maximize fresher employability by bridging education with real-world opportunities through innovation and mentorship.”

VISION AND INTRO : AI AND MACHINE LEARNING



The digital landscape is evolving. At **NS3EDU**, we don't just teach code; we build careers. Our AI & Machine Learning program is engineered to move beyond textbook theory, placing you directly into the shoes of a Data Scientist working on high-stakes enterprise projects.

The NS3EDU Edge: "We focus on the **KRAs (Key Responsibility Areas)** defined by top MNCs, ensuring our students are productive from Day 1 of their employment."

COMPREHENSIVE COURSE CURRICULUM



Phase 1: Data Foundations & Python Mastery

- **Python for AI:** Deep dive into Pythonic structures, OOPs concepts, and Decorators.
- **Data Wrangling:** Master Pandas and NumPy to clean messy, real-world datasets.
- **Mathematical Modeling:** Linear Algebra for weights/biases, Calculus for Gradient Descent, and Statistics for Hypothesis testing.
- **Data Visualization:** Storytelling with Matplotlib, Seaborn, and Tableau.

Phase 2: Machine Learning - The Predictive Engine

- **Supervised Learning:** Linear/Logistic Regression, Decision Trees, and the "Black Box" of Random Forests.
- **Unsupervised Learning:** Pattern recognition through K-Means Clustering and Dimensionality Reduction (PCA).

- **Optimization:** Understanding the Bias-Variance tradeoff, Overfitting vs. Underfitting, and Cross-Validation.
- **Model Evaluation:** Precision-Recall curves, F1-Score, and Confusion Matrix analysis.

Phase 3: Deep Learning & Neural Networks

- **Architecture:** Building Multi-Layer Perceptrons (MLP) from scratch.
- **Computer Vision:** Implementing Convolutional Neural Networks (CNN) for image classification and object detection.
- **Sequential Data:** Working with RNNs and LSTMs for stock market prediction and time-series analysis.
- **Advanced Tools:** Mastering TensorFlow, Keras, and PyTorch.

Phase 4: Generative AI & NLP (The Future)

- **Natural Language Processing:** Text mining, Sentiment analysis, and Word Embeddings (Word2Vec).
- **Generative AI:** Large Language Models (LLMs), Prompt Engineering, and fine-tuning GPT-style architectures.
- **Transformers:** Understanding the "Attention Mechanism" that powers modern AI.

The Internship & Professional Growth

Industry Project Lab (IPL)

Every student undergoes a mandatory **45-day simulated internship**. You will work on:

- **Project A:** Fraud Detection System for a Fintech Client.
- **Project B:** Recommendation Engine (Netflix-style) using Collaborative Filtering.
- **Project C:** Real-time Face Recognition for Attendance Systems.

NS3EDU Career Support Services

- **Resume "Humanification":** Crafting ATS-friendly resumes that highlight your technical stack.
- **The Mock Interview Drill:** 1-on-1 sessions with industry leads from Tier-1 companies.
- **LinkedIn Branding:** Optimizing your profile to attract recruiters globally.
- **Job Placement:** Access to our network of 200+ hiring partners.

Tools You Will Master

- **Languages:** Python, R, SQL
- **Libraries:** Scikit-Learn, Pandas, OpenCV, NLTK
- **Frameworks:** TensorFlow, Py Torch
- **Deployment:** Flask, Docker, AWS (SageMaker)

Certification

Upon completion, you receive:

- 1. Professional Certification in AI/ML** from NS3EDU.
- 2. Internship Experience Certificate** detailing your project contributions.