ISDM Independent Skill Development Mission NXT

EMPOWERING FUTURES,
SHAPING TOMORROW

★ AI-INTEGRATED COURSE

NXT CERTIFIED ADVANCED AI ENGINEER & DEEP LEARNING ARCHITECT

Become an AI expert and shape the future!

Duration: 1 Year | **Certificate** · Advanced | **Eligibility:** Suitable for learners with a background in computer science,

OVERVIEW OF THE COURSE

Build advanced skills in artificial intelligence and deep learning with the NxT Certified Advanced AI Engineer & Deep Learning Architect program. Over one year, explore neural networks, natural language processing, computer vision, and transformer architectures while developing the practical skills to create and deploy sophistic...

- Hands-on AI project experience
- Learn cutting-edge deep learning techniques
- Gain skills in MLOps and cloud deployment
- Expert trainers from the industry
- Flexible learning with practical sessions



1 Year	14	6	13
DURATION	SUBJECTS	PROJECTS	TOOLS

JOIN NOW →

WhatsApp us

WE ARE AVAILABLE AT
600+ LOCATIONS

NOT SURE WHICH COURSE IS RIGHT FOR YOU?
Choose the Best Course for You - Try our AI-Powered Career Counselling for FREE

Start free →

YOUR NEAREST ISDM NxT CENTRE
ISDM NxT VADODARA
3rd Floor, ISDM NxT Vadodara , Uma Char Rasta , Vadodara - 390019, Gujarat - 390019
Call / WhatsApp: **7697221728** · ISDM.VADODARA1@GMAIL.COM

Scan to enquire

COURSE CURRICULUM

What you will learn

01 Subjects → | 02 Projects → | 03 Tools → | 04 AI Integration

01 Subjects & modules

12 subjects with the topics you will learn

01 Advanced Python & AI Software Engineering

- Robust Python Programming And Testing
- Object-Oriented Design And Patterns
- Data Structures And Algorithms
- Numerical Computing And Optimization
- Asynchronous And CPU Parallelism
- GPU Computing And Performance Profiling
- Efficient Data Processing Pipelines

02 Advanced Mathematics for AI

- Vectors, Spaces, and AI Data
- Matrices and Linear Transformations
- Inner Products, Norms, and Geometry
- Tensors and Numerical Representation
- Matrix Decomposition and Conditioning
- Probability and Statistical Inference
- Multivariable Calculus and Derivatives

03 Deep Learning Fundamentals

- Neural Network Foundations And Perceptrons
- Activation Functions And Forward Propagation
- Predictions, Outputs And Loss
- Backpropagation And Gradient Descent
- Initialization And Normalization
- Regularization, Dropout And Evaluation
- PyTorch And TensorFlow/Keras Workflows

04 Computer Vision & Image Intelligence

- Image Data And Processing Foundations
- CNNs And Image Classification
- Transfer Learning And Practical Classification
- Object Detection And Image Segmentation
- Vision Transformers And Model Selection
- Model Evaluation, Robustness, And Applications

05 Natural Language Processing

- Text Preparation And Dataset Foundations
- Language Representations And Embeddings
- Sequence Modelling And Text Classification
- Named Entity Recognition
- Sentiment Analysis
- Text Summarization And NLP Evaluation

06 Transformer Models & LLM Architecture

- Attention And Positional Representations
- Tokenization, Context, And Autoregressive Generation
- Transformer Blocks And Architecture Families
- Language Modeling Objectives And Training Stages
- Model Scaling And Computational Requirements
- Architecture Analysis And Design Trade-Offs

07 LLM Fine-Tuning & Optimization

- Pretrained Model Selection And Readiness
- Fine-Tuning Dataset Preparation
- Supervised Fine-Tuning Workflows
- Parameter-Efficient Fine-Tuning With LoRA And QLoRA
- Quantization, Compression And Benchmarking
- Model Evaluation, Inference Optimization And Resource Management

08 Advanced RAG & Knowledge Systems

- Production RAG Architecture And Ingestion
- Dense, Sparse And Hybrid Retrieval
- Query Rewriting, Decomposition And Reranking
- Advanced Chunking, Metadata And Knowledge Graphs
- Retrieval And Generation Evaluation
- Secure Enterprise Retrieval And Capstone Design

09 MLOps & AI Engineering Pipelines

- Production ML Systems And Readiness
- Experiment Tracking And MLflow
- Dataset And Model Versioning
- Reproducible Training Pipelines
- Model Registry And CI/CD Releases
- Automated Testing And Production Monitoring
- Retraining, Rollback And Recovery

10 Cloud AI Infrastructure & Deployment

- Cloud AI Workloads and Provider Selection
- GPU Compute and Docker Containers
- Kubernetes Model-Serving Deployment
- Inference APIs, Traffic and Autoscaling
- Cloud Cost, Monitoring and Security
- Production Architecture, Reliability and Capstone

11 AI Security, Ethics & Governance

- Responsible AI Engineering And Lifecycle Risk
- Dataset Bias And Model Fairness
- Explainability, Transparency And Human Interpretation
- Data Privacy, Adversarial ML And Misuse Risks
- Secure AI Deployment And Misuse Controls
- Auditability, Compliance And Human Oversight

12 Enterprise AI System Architecture

- End-to-End AI Solution Architecture
- AI Microservices and Inference APIs
- Model Serving and Inference Pipelines
- Multi-Model Applications and Enterprise Integration
- Scalability, Reliability, and Observability
- Architecture Documentation and Project Lifecycle

02 Projects & assignments

Hands-on work for your portfolio

P1 Build and evaluate a deep learning model for a classification or forecasting problem, documenting data prepara

P2 Develop an NLP application such as a text classifier, document information extractor, or question-answering pr

P3 Create a computer vision solution for an image recognition or object detection use case.

P4 Fine-tune or adapt a transformer model for a defined language task and compare its performance with a baseline

P5 Implement an MLOps pipeline that packages, tests, deploys, and monitors a model.

P6 Complete a capstone project that takes an AI solution from problem definition through cloud deployment, with a

03 Tools & software you will master

4 industry tools


TensorFlow


PyTorch


Keras


AWS

04 AI Integration

How AI is used inside the work of this course

AI SUBJECT

AI Fundamentals & Prompt Engineering

- **AI Basics and Everyday Uses**
- **Generative AI: How It Works**
- **Prompt Engineering Foundations**
- **AI for Study and Workplace Tasks**
- **Fact-Checking and Reliable Research**
- **Privacy, Safety and Responsible Use**
- **Integrated Practice and Review**

AI SUBJECT

AI for Programming & Web Development

- **AI Pair Programming Setup: VS Code and GitHub Copilot**
  GitHub Copilot in VS Code: Sign in, use inline suggestions and Chat, then try agent mode o
- **AI-Assisted Front-End Development**
  GitHub Copilot in VS Code: Use inline suggestions and Chat while building and refining a r
- **Python Coding and AI Agents in the Editor and Terminal**
  Claude Code in Terminal and project files: Install or access it using the current official
- **GitHub Team Workflow and AI Code Review**
  GitHub Copilot code review in GitHub pull requests: Request a review on a practice pull re
- **Calling AI APIs from Your Own App**
  OpenAI API in A local app or server-side project: Create an API key with available account
- **AI-Assisted Testing, Debugging and Documentation**
  GitHub Copilot Chat in VS Code: Use project context to suggest tests or explain a failure,
- **AI-Assisted Deployment and Final Project**
  GitHub Copilot in VS Code: Ask for help preparing or explaining deployment files, then rev

AI TOOLS YOU WILL USE

CH ChatGPT

Google Gemini

GitHub Copilot

VS Code

GitHub

Claude

MC Microsoft Copilot

Perplexity

NotebookLM

CAREER OPPORTUNITIES

Where this course can take you

Advanced AI Engineer
Fresher salary: ₹4.0-6.0 LPA*

Deep Learning Engineer
Fresher salary: ₹3.5-5.5 LPA*

Machine Learning Engineer
Fresher salary: ₹4.0-6.0 LPA*

NLP Engineer
Fresher salary: ₹3.8-5.8 LPA*

Computer Vision Engineer
Fresher salary: ₹4.0-6.0 LPA*

Freelancing & own business

- AI consulting for businesses
- Developing custom AI solutions
- Creating AI-powered applications
- Data analysis services

Industries that hire

- Information Technology
- Finance
- Healthcare
- E-commerce
- Automotive

Grow further

- NxT Certified Data Scientist
- NxT Certified AI Solutions Architect
- Advanced courses in AI Ethics

Certification

Earn an ISDM NxT certificate after successfully passing the final assessment.

Practical AI-integrated project | **Final online test** | **Verifiable certificate**

JOB SUPPORT

How we help you get a job

1
Personalized resume building sessions

2
Mock interviews to boost confidence

3
Access to job offers through the dashboard

4
Guidance on job applications

* Typical fresher salary ranges in India; the actual salary depends on the employer, the city and your skills.

WHY START NOW

Your future is built by the skills you learn today.

Companies hire people who can do the work. People who use AI well at work are in demand - this course teaches you the job skills and the AI tools together. Every month you practise adds a project to your portfolio - the best time to start is now.

18+	600+	2,708+	390+
Years of training experience	Centres across India	Job offers to our students	Hiring companies

UNIQUE FEATURES AT ISDM NxT

- ✓ Free pre-counselling to choose the right course
- ✓ Study material, attendance, assignments, exams and results online from day one
- ✓ 24x7 AI trainer (ChatNxT) for your doubts
- ✓ Experienced, rated trainers and daily class feedback
- ✓ Practical lab sessions and live projects
- ✓ Monthly online mentorship sessions
- ✓ Resume, mock interviews and job offers in your student dashboard
- ✓ Freelancing and start-up guidance

● LIVE PLACEMENT DATA

Latest job offers to ISDM NxT students

Updated 20 Nov 2026



Gaurav M.
India
Java Software Development Engineer
Health Catalyst



Geeta K.
New Delhi
tellecaller for digital marketing
balajimarketingexperts



Anand S.
Muvattupuzha
Hiring Junior Account Executive J...
CorpZop



Adarsh S.
Ghugus
TGT Computer Science
Adani Foundation



Priyanka Y.
Mumbai
Data Entry Operator (Full-time) -...
CorpZop



Rajan S.
Ahilyanagar
Computer Trainer
Enlearning skill development Ltd

Job offers shared with our students through the ISDM NxT job network. See all at isdmnext.in/latest-placement

LIMITED SEATS · VALID TILL 30 NOV 2026

FREE Ambassador Affiliate Programme

Complete your admission within **10 days** and join the ISDM NxT Ambassador Affiliate Programme free of cost: refer friends, earn referral rewards as per the programme and get featured on the ambassador leaderboard.

CLAIM NOW

TAKE THE FIRST STEP

Book your FREE counselling session today

Meet our counsellor, see the lab, get your doubts answered and know the current fees and offers for your centre.

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Try it FREE → isdmnext.in/course-for-you

01
Counselling
Free guidance to pick the right course

02
Training
Practical classes, labs and projects

03
Mentoring
Experts, AI trainer and feedback

04
Placement support
Resume, interviews and job offers

What you get with this course

- Comprehensive study material
- Practical lab sessions
- Real-world live projects
- 24x7 AI trainer support
- AI career counselling
- Interview preparation assistance
- Job offers in student dashboard
- Certification upon completion

ISDM NxT Head Office: 309, Saffron Plaza, Airport Road, Vadodara, Gujarat, 390022 · +916263625594 · inquiry@gmail.com

Fees depend on the centre and current offers - ask your counsellor. Course content may be updated to stay current with industry needs. · isdmnext.in