



IALSD

INSTITUTE FOR ADVANCED
LEARNING
& SKILL DEVELOPMENT

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING & DATA SCIENCE

ADVANCED PROFESSIONAL CERTIFICATION



2026

**INDUSTRY-READY
AWS-POWERED
JOB-LINKED PROGRAM**



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Website
www.ialsd.com



INTRODUCTION

About the Institution & Core Values



The Institute for Advanced Learning & Skill Development (IALSD) is a future-focused training institution dedicated to bridging the critical gap between academic education and industry-ready skills. In an era driven by Artificial Intelligence, Data, and emerging technologies, IALSD empowers learners with practical, job-oriented, and globally relevant competencies.

Through industry-aligned curricula, hands-on training models, and outcome-driven delivery, IALSD prepares students not just to earn certificates, but to build sustainable and successful careers in high-growth technology domains.



Personalized Mentorship Model with Elite Batch Size



Industry-Integrated Emerging Tech Training Ecosystem



Proven Employability & Placement Orientation

VISION & MISSION



✓ VISION

To become a globally respected centre of excellence in advanced technology education by creating industry-ready professionals equipped to lead innovation in Artificial Intelligence, Data Science, and emerging digital domains.

✓ MISSION

- To deliver high-impact, hands-on training aligned with real industry needs
- To focus on employability, practical exposure, and career outcomes
- To integrate global standards, certifications, and cloud platforms into learning
- To nurture ethical, responsible, and innovative AI professionals
- To support learners with structured placement assistance and lifelong career guidance

ABOUT THE PROGRAM

Training Matters

The Advanced Certification in Artificial Intelligence, Machine Learning & Data Science is IALSD's flagship, elite-level program designed for graduates and aspiring technology professionals. This 400-hour, offline, AWS-powered program follows a build-deploy-optimize approach, ensuring every participant graduates with real-world project experience and job readiness.

With limited batch sizes, personalized mentoring, and placement-linked outcomes, the program sets a new benchmark in advanced AI education.



 **Advanced, AWS-Powered, Industry-Grade AI Training**

 **International Standard Curriculum + Global Certification Mapping**

 **Portfolio-Driven, Hands-On Real Project Experience**

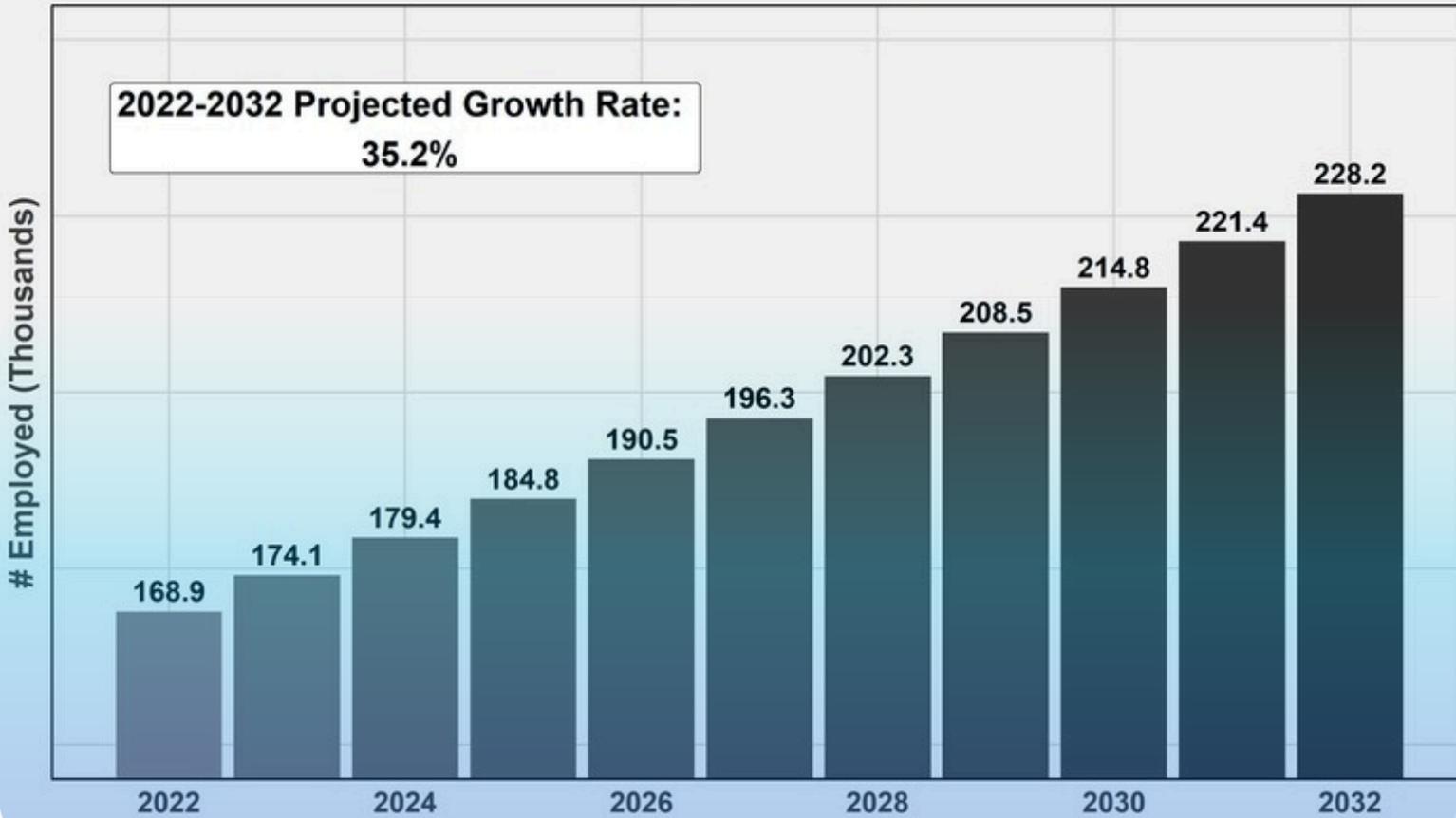
LEARNING PEDAGOGY

Concept → Lab → Project → Deployment → Review → Interview Readiness



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Data Scientist Projected Employment Level



AI & DATA SCIENCE SKILL DEMAND EXPLOSION

- ★ AI job demand growing at 35–40% CAGR
- ★ Data Science & ML among top 3 hiring priorities globally
- ★ Over 1 million AI-related jobs expected in India by 2030
- ★ AI skills now required across IT, Finance, Healthcare, Manufacturing, Retail

HOW BIG is the Demand for AI Talent?

There are fewer than **10,000** people with real AI skill sets that tackle AI problems and solutions. There are way more than **10,000** problems and solutions that need AI.

PhDs with **NO** experience are receiving salary offers ranging from **\$300K - \$500K** with stock options

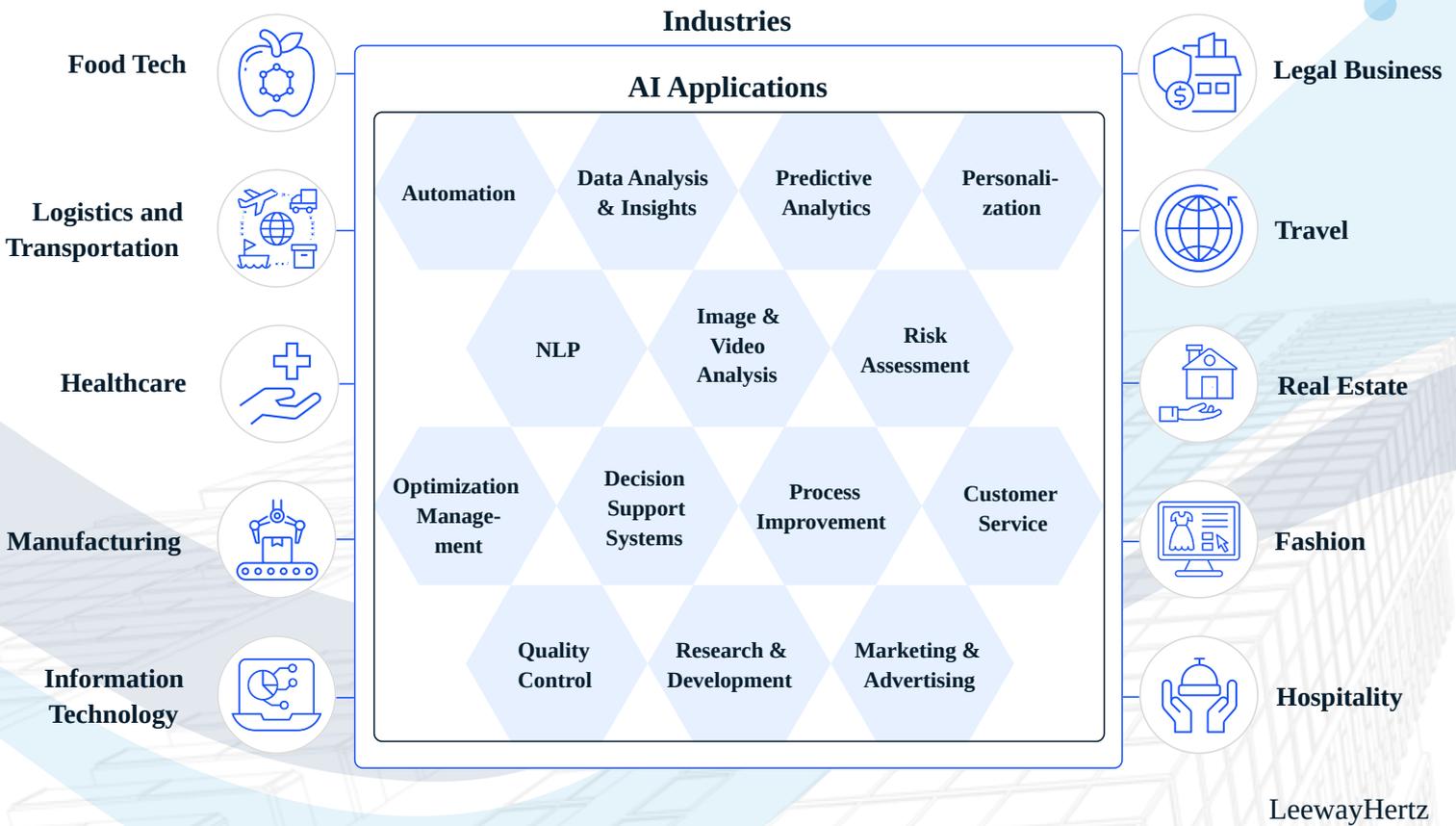
Google bought DeepMind for **\$650M**. It had **50 people**. Each person was worth **\$13M** to Google.

AI is needed to **solve** a long list of big problems (driverless vehicles, cybersecurity, healthcare diagnosis, a better SIRI)

The biggest hurdle to solving problems with AI is the talent gap.

decide,

*tps://www.nytimes.com/2017/10/22/technology/artificial-intelligence-experts-salaries.htm'



WHY COMPANIES ARE HIRING AI ENGINEERS

-  **Finance:** Fraud detection, credit scoring
-  **Healthcare:** Disease prediction, medical imaging
-  **Retail:** Recommendation systems, demand forecasting
-  **Manufacturing:** Predictive maintenance
-  **Cybersecurity:** Threat detection
-  **EdTech:** Adaptive learning platforms

SARAS AI INSTITUTE

STOP GUESSING WHERE AI JOBS ARE GOING. LOOK AT LINKEDIN DATA.

Here are the AI roles software engineers can upskill into

AI ENGINEER
10,000+ ROLES

Build AI-powered features inside real products.

Core skills: Python, APIs, LLMs, RAG. This is where most AI hiring is happening.

Top companies hiring: Google, Microsoft

01

MACHINE LEARNING ENGINEER
10,000+ ROLES

Train and deploy predictive models at scale.

Core skills: ML algorithms, PyTorch or TensorFlow, ML Ops.

Top companies hiring: amazon, Meta

02

APPLIED AI DEVELOPER
9,200+ ROLES

Ship end-to-end AI applications used by customers.

Core skills: Backend development, model integration, cloud.

Top companies hiring: Amazon, Uber

03

AI SOLUTIONS ENGINEER
7,000+ ROLES

Translate business problems into AI workflows.

Core skills: APIs, systems design, LLM tooling.

Top companies hiring: IBM, Microsoft

04

GENERATIVE AI ENGINEER
5,400+ ROLES

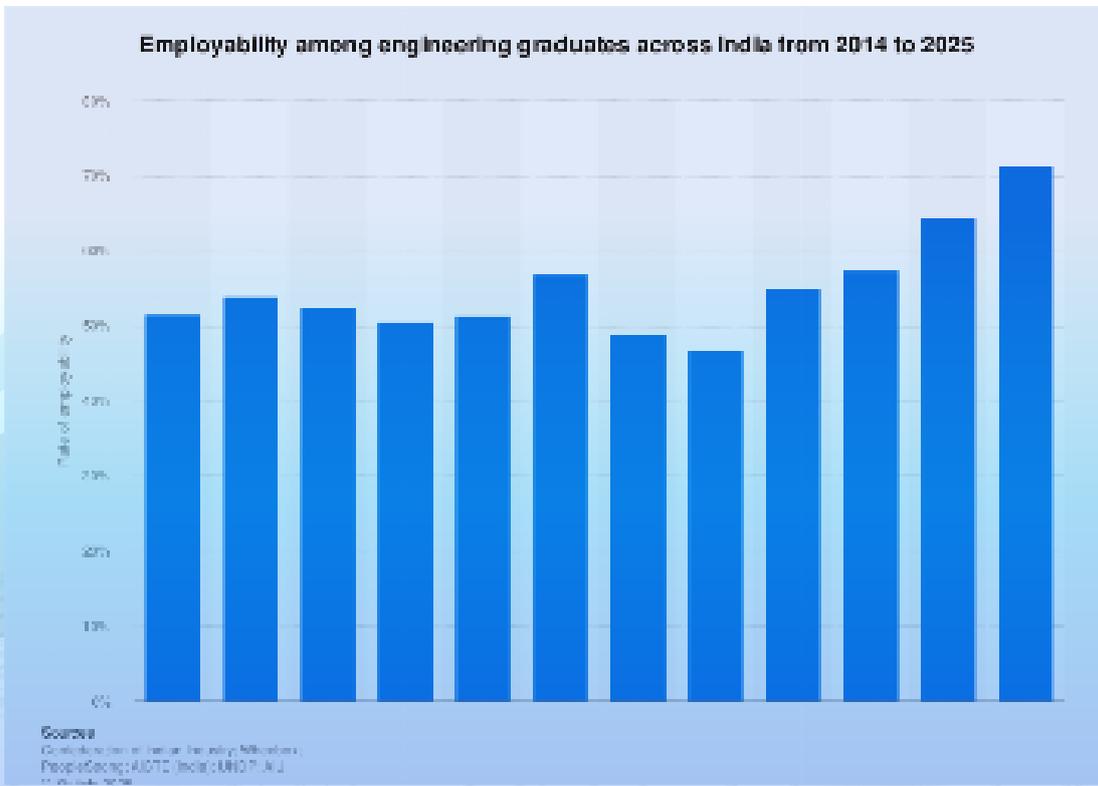
Build and fine-tune LLM-driven systems.

Core skills: Transformers, embeddings, LoRA, evaluation.

Top companies hiring: OpenAI, NVIDIA

05

TOP 5 AI ROLES BY LIVE LINKEDIN JOB VOLUME



WHY DEGREES ALONE ARE NOT ENOUGH

TRADITIONAL EDUCATION

- Theory-heavy
- Limited real datasets
- No deployment exposure
- Minimal interview readiness

INDUSTRY EXPECTATION

- Hands-on ML pipelines
- Real-world problem solving
- Cloud deployment (AWS)
- Interview-ready engineers

AI SKILL-SET GAP ANALYSIS FOR COMMERCIAL TEAMS

! What AI/ML skills are currently lacking within the team?

65% Lacking AI Skills

Have AI Skills

SKILL GAPS IN COMMERCIAL TEAMS

AI/ML Knowledge	High
Data Analysis	Medium
Tech Proficiency	Low
Data Literacy	Very Low

TEAM SKILLS | AI SKILL-SET | REQUIRED SKILLS

AI SKILL-SET GAP

LEVEL UP YOUR AI CAREER WITH TOP AI SKILLS IN 2025



AI is among the fastest growing industries now offering plenty of lucrative job opportunities, provided you possess the right AI skills and knowledge.

Where is AI heading to?



In-demand AI Skills to Master in 2025

Here are some in-demand AI skills you must gain to succeed in your AI career.

SMART ENGINEERING

It is essential to gain AI enable to produce more accurate and relevant output using specific and targeted prompts.

CLOUD COMPUTING

As organizations are migrating to cloud infrastructure for the ease of use, accessibility and scalability they offer, demand for AI professionals with cloud computing skills is growing.

GENERATIVE AI

Generative AI helps you generate new and unique content across various formats, and is an in-demand AI skill to enhance today's existing generative research, and so on.

PROGRAMMING LANGUAGES

Programming is an indispensable AI skill and professionals must be proficient in various programming languages and their libraries like Python, R, Java etc.

MACHINE LEARNING

It is the core technology powering AI. So, AI professionals should know machine learning techniques like supervised and unsupervised learning, neural networks, deep learning, and more.

AI AND ML FRAMEWORKS

Familiarize yourself with top AI and ML frameworks including TensorFlow, PyTorch, and so on to build and train efficient AI models.

Other Essential Skills to Stay Ahead

The AI industry is huge and you will need a wide range of AI skills to stay ahead of your competitors.

Consider gaining these essential AI skills as well:



These are essential technical skills needed to boost your AI career.

However, don't forget to enhance your soft skills including:



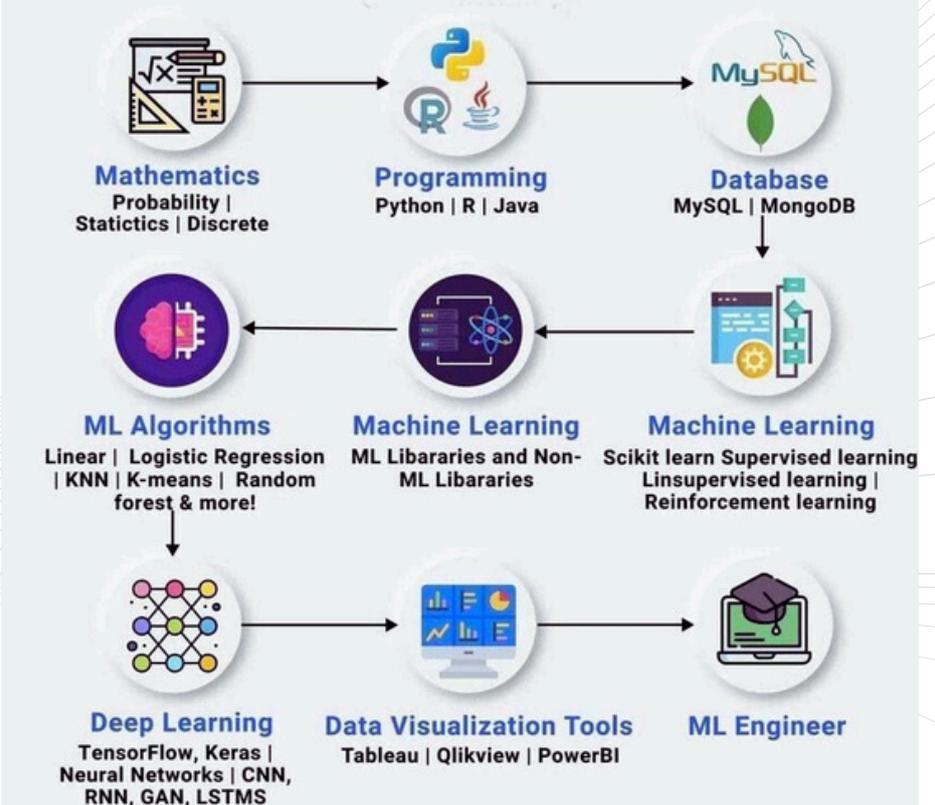
Take the first step towards AI learning journey with best AI Certification programs.

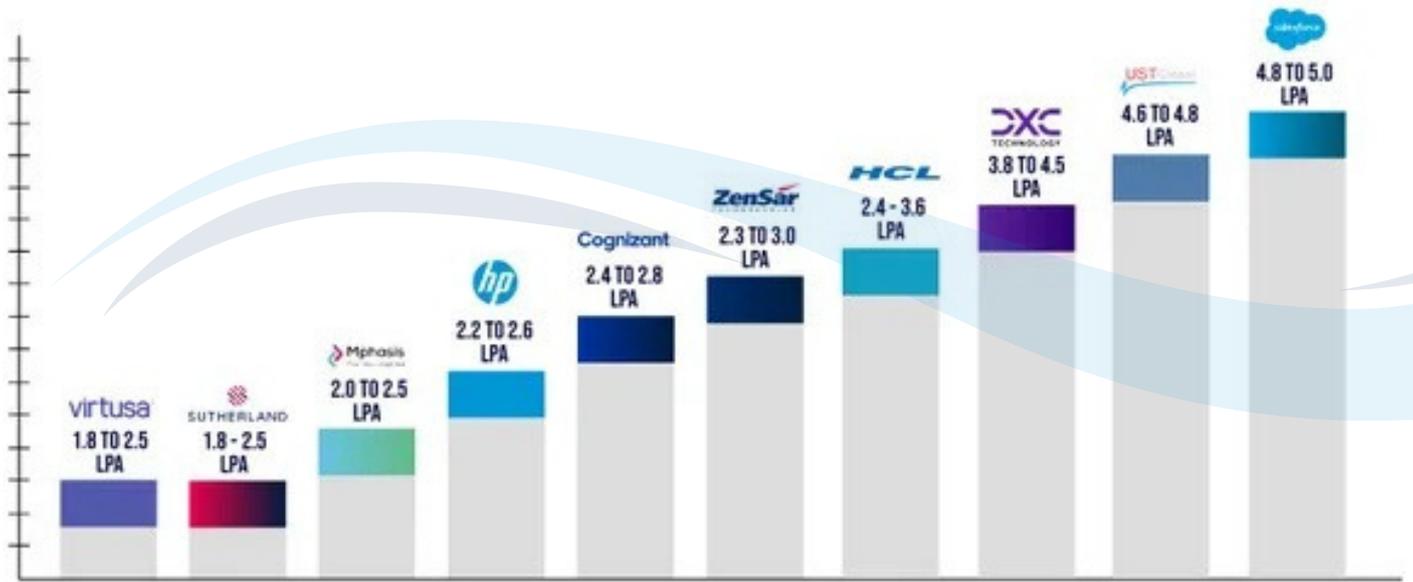
CAREER PATHWAYS AFTER ADVANCED AI-ML TRAINING

ROLES MAPPED

- Junior Data Scientist
- Machine Learning Engineer
- AI Engineer
- NLP / CV Engineer
- Applied AI Developer
- AI Analyst

ML ENGINEER ROADMAP





SALARY OUTLOOK – INDIA & GLOBAL

India

- Entry Level: ₹5 – 8 LPA
- 2–4 Years: ₹10 – 18 LPA
- Senior AI Roles: ₹25+ LPA

Global

- Entry Level: \$70K – \$100K
- Experienced: \$120K – \$180K+

SKILLS YOU LEARN VS SKILLS COMPANIES HIRE FOR

SKILLS YOU GAIN

Python for ML
 Data Science
 Machine Learning
 Deep Learning
 NLP & Computer Vision
 Generative AI
 MLOps & AWS Deployment



SKILLS RECRUITERS DEMAND

Python for ML
 Data Science
 Machine Learning
 Deep Learning
 NLP & Computer Vision
 Generative AI
 MLOps & AWS Deployment

Artificial Intelligence, Machine Learning & Data Science

Duration: 400 Hrs | 1 year

GLOBAL CERTIFICATION ALIGNMENT

This program is mapped and aligned with:

- AWS Certified Machine Learning – Specialty
- Google Professional Machine Learning Engineer (conceptual alignment)
- Microsoft Azure AI Engineer (conceptual mapping)
- TensorFlow Developer Certificate
- IBM Applied AI frameworks (benchmarking)

PROGRAM OBJECTIVE

To produce job-ready AI & ML Engineers who can:

- Build production-grade AI systems
- Work with real-world datasets
- Deploy AI models on AWS
- Clear technical interviews confidently
- Join industry immediately after course completion

PLACEMENT PROMISE MODEL

- ✓ Guaranteed Interview Opportunities
- ✓ Placement assistance until job placement
- ✓ Industry referrals
- ✓ Startup & corporate placement collaboration
- ✓ Internship-to-job conversion support
(Placement is subject to student performance & assessment benchmarks)

ASSESSMENT & EVALUATION

- Weekly coding labs
- Module-wise projects
- Mid-term technical evaluation
- Final capstone evaluation
- Industry mentor feedback

WHAT MAKES THIS PROGRAM PREMIUM

Batch size limited to 10 students
Offline, lab-driven learning
Global certification alignment
AWS-focused deployment
Real industry datasets
Placement-linked outcomes



**100% Offline
(Lab-based
learning)**



**Job-Linked |
Industry-Grade |
Global Standards**



**100 % Placement
with Guaranteed
Interviews**



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Students will be academically and practically prepared to attempt these global certifications.

Artificial Intelligence, Machine Learning & Data Science



PHASE 1: FOUNDATIONS FOR AI ENGINEERS (60 HOURS)

Module 1: Advanced Python for AI & Data Science

Hands-on Focus

- Python for high-performance ML
- OOP & modular ML pipelines
- NumPy vectorization
- Pandas for large-scale data
- Feature engineering automation
- Exception handling & debugging
- Git & version control for ML

Module 2: Applied Mathematics & Statistics for AI

Hands-on

- Mathematical implementation using Python
- Visualization-driven intuition building

PHASE 2: DATA SCIENCE & MACHINE LEARNING (100 HOURS)

Module 3: Exploratory Data Analysis & Feature Engineering

Hands-on Focus

- Business-driven EDA
- Handling missing & noisy data
- Outlier detection
- Feature correlation & reduction
- Data visualization storytelling

Module 4: Machine Learning Algorithms

Advanced Practices

- Model tuning
- Cross-validation
- Imbalanced data handling
- Explainable AI (SHAP, LIME)

Major ML Project

- End-to-end ML solution for an industry problem

PHASE 3: DEEP LEARNING & NEURAL NETWORKS (90 HOURS)

Module 5: Deep Learning Fundamentals

Hands-on

- Build neural networks from scratch
- Image classification systems

Module 6: Advanced Deep Learning

Hands-on

- Transfer learning
- CNN architectures
- RNN, LSTM, GRU
- Attention mechanisms
- Transformer models (practical view)

Projects

- Recommendation engine
- Time-series forecasting system



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This program is not for everyone.
It is designed for the few who are willing to work, build, and grow.

Artificial Intelligence, Machine Learning & Data Science



PHASE 4: SPECIALIZED AI DOMAINS (80 HOURS)

Module 7: Natural Language Processing

Hands-on Focus

- NLP pipelines
- Word embeddings
- Transformer-based NLP
- BERT & GPT architectures
- Sentiment analysis
- Chatbot development

Project

- Enterprise-grade AI chatbot

Module 8: Computer Vision

Project

Intelligent vision-based detection system

Module 9: Generative AI & LLMs

Project

GenAI-powered document assistant

PHASE 5: MLOps & AWS DEPLOYMENT (40 HOURS)

Module 10: MLOps on AWS

- ML lifecycle management
- Model versioning
- CI/CD for ML
- Docker
- AWS services
- FastAPI deployment
- Monitoring & scaling ML systems

Hands-on Focus

- Deploy ML models on AWS
- End-to-end MLOps pipeline

PHASE 6: CAPSTONE, INTERNSHIP & PLACEMENT (30 HOURS)

Module 11: Industry Capstone Project

Students can choose ONE domain

- FinTech
- Healthcare
- Smart Cities
- Cybersecurity
- Retail/Ecom
- EdTech

Module 12: Career Readiness & Placement Support

Hands-on

- AI resume building
- GitHub & LinkedIn optimization
- Coding interview prep
- ML system design interviews
- Mock interviews
- Placement mapping



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Learning AI is not about watching videos or collecting certificates.
It is about thinking, building, deploying, and delivering results.

About the Training



Eligibility & Selection Process



- Educational background required
- Basic programming or logical aptitude expectations
- Screening interview / assessment
- Final shortlisting based on motivation & readiness



Who This Program Is NOT For

This program is not suitable for:

- Learners looking for quick or easy certifications
- Those unwilling to practice coding and projects regularly
- Candidates expecting placement without effort or discipline

It is designed for students who are serious about building long-term careers in AI.

Tools & Technologies Covered



- Python, NumPy, Pandas
- Scikit-Learn, TensorFlow, PyTorch
- AWS (S3, EC2, SageMaker)
- Git, GitHub
- FastAPI, Docker

Students are Working with



pwc



Capgemini



accenture



tcs TATA
CONSULTANCY
SERVICES



ITC
ITC Limited



EY



Tech
Mahindra



ITC INFOTECH
Business-friendly Solutions



NETWORK
INTELLIGENCE



LN/EL Lee & Nee
Softwares (Exports) Ltd.



VYRAZU
LABS



SentientGeeks



Bandhan
Bank



vivo



SIBIA
Enabling Smarter Decisions



itorizin



OnProcess



ZODHYA



Student Success Stories



Anirban
Karmakar



I completed an training in Artificial Intelligence and Machine Learning at Institute for Advance Learning & Skill Development.

During the training, I gained hands-on experience in core AI/ML concepts like supervised learning, deep learning, Python programming, and real-world project development. The projects we worked on were both challenging and exciting, which really helped strengthen my practical skills.

I would highly recommend Institute for advance Learning & Skill Development to anyone looking to start or advance their career in Artificial Intelligence and Machine Learning.It 's a great place to learn, grow, and build confidence in your skills. ”



I had the opportunity to enroll in the IALSD Skill Development Courses for Future Innovators, and the experience has been truly transformative. The program is designed with a strong focus on practical learning, industry relevance, and innovation, making it ideal for students and professionals preparing for cutting-edge domains like Artificial Intelligence and Machine Learning (AI/ML).

The curriculum is well-structured, covering both fundamental concepts and advanced topics with clarity. The hands-on projects, real-world case studies, and mentorship sessions helped me bridge the gap between theory and practical application. I especially appreciated the emphasis on AI/ML tools, data analysis, and problem-solving skills.



Srijani
Bhattacharyya



The AIML training at the Institute for Advanced Learning and Skill Development (IALSD) is a highly recommended program. It provides a comprehensive blend of theoretical knowledge and practical, hands-on application, ensuring that learners are well-equipped with job-ready skills. The curriculum is designed with input from industry experts, and the program is led by experienced mentors who provide invaluable guidance. The institute also offers career support and placement assistance, which is a significant advantage for those looking to start or advance their careers in AI and machine learning. Overall, it's a transformative and worthwhile experience for aspiring professionals in the field. ”



Anisha Sarkar



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GLOBALLY RELEVANT AI SKILLS. MEANINGFUL CAREERS. A STRONGER FUTURE.

Contact Us



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*Artificial
Intelligence will
not replace you.
People who
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Artificial
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