



**COURSE  
DURATION**  
**2 MONTHS**

**TEACHING  
HOURS**  
**40+ HOURS**

**LAB  
HOURS**  
**40+ HOURS**

# ARTIFICIAL INTELLIGENCE BASIC BUILDER

Career Pathway Skilling Program for Engineering Students

In Collaboration with



**FOUNDATION FOR INNOVATION  
AND TECHNOLOGY TRANSFER**

भारतीय प्रौद्योगिकी संस्थान दिल्ली  
Indian Institute of Technology Delhi

# THE FUTURE IS ARTIFICIAL INTELLIGENCE

**NASSCOM®**

Artificial intelligence (AI) has created new opportunities in recent years. Industries are being affected, making previously unthinkable activities like space travel and melanoma diagnosis viable. As a result, there has also been a continuous rise in AI careers. LinkedIn said AI professionals would be among the 'jobs on the rise' in 2023 and beyond.

AI is set to be the key source of transformation, disruption and competitive advantage in today's fast changing economy. In this report we've drawn on the findings to create our AI Impact Index, where we look at how quickly change is coming and where your business can expect the greatest return.



IndiaAI has a mission-centric approach that ensures a precise and cohesive strategy to bridge the gaps in the existing AI ecosystem viz-a-viz Compute infrastructure, Data, AI financing, Research and Innovation, targeted Skilling, and institutional capacity for Data to maximize the potential of AI to advance India's progress.

Generative AI is already proving a significant differentiator for the 5% of the population who work more than one job or have multiple earnings streams. A recent Morgan Stanley Research survey shows that multi-earners who use generative AI tools to enhance productivity or efficiency make \$8.50 per hour, or 21%, more than those who don't.

**Morgan Stanley**

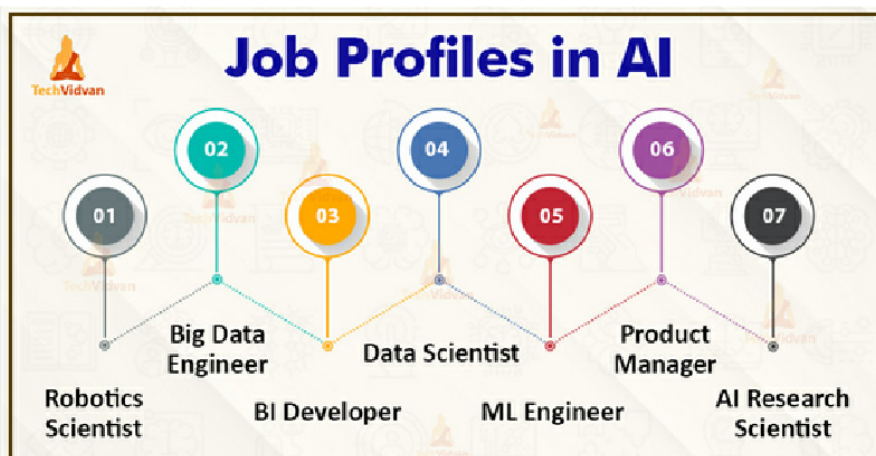


# WHY ARTIFICIAL INTELLIGENCE

Experts at Nexford University say that AI and machine learning will help workers by creating more occupations than it replaces. That said, in order to ride the wave and build a new career, you have to have procured the skills necessary to get the job done. If you're exposed to AI and are looking to pivot into an AI-focused role, demonstrating your knowledge and experience with AI development can give you an edge.

## ARTIFICIAL INTELLIGENCE EMPLOYMENT & SALARY TRENDS

The Artificial Intelligence market is expected to grow by USD 190.61 billion by 2025. Since the adoption of Artificial Intelligence is rapidly increasing in various applications, it is projected to grow at the highest CAGR during the forecast period. Big Tech companies like IBM, Google, Facebook, Microsoft, Amazon, etc., are Readily hiring experts Proficient in AI.



Role	India	US	UK	Canada
Machine Learning Engineer	INR 6,00,000	\$112,000	£57,500	CAD 96,000
Data Scientist	INR 8,50,000	\$117,000	£57,500	CAD 96,000
Data Analyst	INR 4,50,000	\$75,000	£30,000	CAD 60,000
Deep Learning Engineer	INR 8,00,000	\$129,000	£77,500	CAD 100,000
NLP Engineer	INR 10,00,000	\$132,000	£62,500	CAD 108,000

# ABOUT **COLLABORATION** **FITT, IIT DELHI**

Foundation for Innovation and Technology Transfer (FITT) at IIT Delhi has been the vanguard of knowledge transfer activities from academia since its inception in 1992. This techno-commercial organization from academia is counted amongst the successful such organizations. FITT provides superior program management services and is steadily increasing its operational landscape. The varied roles of FITT can be seen in enabling innovations and technopreneurship, business partnerships, technology development, consultancy, collaborative R&D, technology commercialization, development programs, corporate memberships etc. These roles are necessitated by the key agenda of the Foundation to showcase the Institute's "intellectual ware" to industry, and thereby unlock its knowledge base and inculcate industrial relevance in teaching and research at IIT Delhi.

IIT Delhi is India's eminent academic and research institution. It co-develops a range of training programs from College level to working professionals and also on emerging areas like Blockchain, AI/ML, IoT, AR/VR & Cybersecurity. The CoE in IIT Delhi has been set up to conduct deep research and product development in these areas, particularly for critical infrastructures like Waterways, Smart Cities, Railways and Energy.



# CONTENT AND CURRICULUM

The course are designed to be job-oriented for suitably skilling the participants for the role of AI/ML analysts, forecasting analysts, AI Product Developers, and AI Researchers, apart from being AI Entrepreneurs . Hence, the course will be practical heavy and will familiarize the participants to the development environment of the platforms providing an end-to-end developer skilling. The course will be made more contextual by following up with Capstone projects designed after the latest protocol and application development.

The details of the course content and curriculum are provided below:

## **COURSE NAME – FOUNDATIONAL COURSE IN ARTIFICIAL INTELLIGENCE**

### **Course Objectives:**

- To Understand AI Fundamentals: Provide students with a solid understanding of the foundational concepts, principles, and terminology in Artificial Intelligence.
- To Develop Problem-Solving Skills: Equip learners with the ability to apply AI techniques to address real-world challenges and enhance their problem-solving capabilities.
- To Foster Ethical Awareness: Introduce the ethical considerations and responsible use of AI, enabling students to make ethical decisions in AI applications.
- To Prepare for AI-Related Careers: Prepare students for careers in AI by providing the requisite knowledge and skills in AI development and implementation.
- To Promote Innovation and Creativity: Encourage creative thinking and innovation in developing AI-driven solutions and applications.

## Prerequisites

- High school diploma or equivalent.
- Basic understanding of mathematics and programming fundamentals.
- Familiarity with at least one programming language is beneficial but not mandatory.
- Access to a computer with internet connectivity for programming assignments and project work

## Learning Outcomes

*By the end of the course, students should be able to:*

- *Define key AI concepts and terminology, such as machine learning, neural networks, and data mining.*
- *Apply AI techniques to analyze and solve real-world problems.*
- *Evaluate the ethical implications of AI applications and make informed, responsible decisions.*
- *Demonstrate proficiency in AI programming languages and tools.*
- *Develop AI-driven solutions for various applications.*

# COURSE NAME – FOUNDATIONAL COURSE IN ARTIFICIAL INTELLIGENCE

MODULES	TOPICS COVERED
<b>Module 1: Introduction to AI</b>	AI Definitions and Concepts
	Historical Perspective
	AI in the Modern World
<b>Module 2: Machine Learning Fundamentals</b>	Supervised Learning
	Unsupervised Learning
	Reinforcement Learning
<b>Module 3: Neural Networks and Deep Learning</b>	Perceptrons
	Feedforward Neural Networks
	Convolutional Neural Networks
	Recurrent Neural Networks
<b>Module 4: Data Analysis for AI</b>	Data Preprocessing
	Feature Engineering
	Model Evaluation
<b>Module 5: Ethical Considerations in AI</b>	Bias and Fairness
	Privacy and Security
	Accountability and Transparency

<b>Module 6: AI Programming Languages and Tools</b>	Python for AI
	Popular AI Libraries (e.g., TensorFlow, PyTorch)
<b>Module 7: Basics of AI Applications</b>	Natural Language Processing
	Computer Vision
	Robotics
	Healthcare
<b>Module 8: Capstone Project</b>	Apply AI knowledge to develop a real-world AI solution

# ENROLLMENT PROCESS

The FITT-IIT Delhi course is being provided to selected students free of cost by ODSA.

**Eligibility:** Current students as well as past pass-outs of Odisha engineering colleges and existing working professionals of Odisha. (Limited seats only)

**Process:** Kindly fill out the below form, pay registration fees - Rs.200/- and submit the form and receipt to your college in charge

## PLEASE FILL IN THE BELOW FORM

Name.....

Institution Name.....

Student ID.....

Current Pursuing Course or Employment Details

.....

Year..... CGPA.....

Phone..... E-Mail.....

Aadhar Number.....

Fathers Name.....

☐ AI Basic Builder



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# CERTIFICATE

OF COMPLETION

PROUDLY PRESENTED TO

*Demo*

ARTIFICIAL INTELLIGENCE BUILDER

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SIGNATURE

SIGNATURE



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