ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

FROM VISHLESAN i-HUB, IIT PATNA

About IIT Patna, Vishlesan i-Hub

National Innovation Hub: Vishlesan i-Hub at IIT Patna is part of a national mission, advancing AI in speech, video, and text analytics for sectors like health, education, and security.

Premier Technical Institute: IIT Patna is one of India's top engineering institutes, known for its cutting-edge research and strong academic foundation.

Strong Industry & Research Ecosystem: With active collaborations, incubators, and innovation hubs, IIT Patna bridges academia and industry to drive real-world impact.

Program Overview

The foundations in Artificial Intelligence and Machine Learning Program is designed to accommodate learners from diverse academic and professional backgrounds. Through structured coursework and hands-onprojects, students will build a solid understanding of Artificial Intelligence (AI) and Machine Learning (ML) techniques—starting from foundational mathematics and basic programming, progressingthrough core machine learning models, and culminating in cutting-edge AI applications. By the endof the program, participants will be able to confidently implement AI/ML solutions, interpret results,and address real-world problems across various domains.
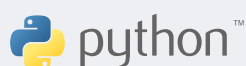
Why Choose This Course?

- **Prestigious Certification:** Receive a certificate of completion with Vishlesan i-Hub, IIT Patna, significantly enhancing your profile's value.
- **Real-World Capstone Project:** Work on capstone projects designed to solve practical business challenges.
- **Expert Faculty & Industry Insights:** Learn from IIT faculty & industry experts bringing real-world insights to your learning journey.
- **Placement Opportunities*:** Receive resume reviews, career coaching, and placement support to land your dream role.

Eligibility: 7+ CGPA and 75% attendance

What Will You Learn?

Begin your AI/ML journey with a beginner-friendly, industry-aligned curriculum from Vishlesan i-Hub, IIT Patna. Covering everything from Python basics to advanced topics like deep learning and generative AI, the program builds real-world skills through hands-on projects and expert-led learning.

Toolkit

python   docker   PyTorch   NumPy

pandas   GitHub   OpenAI   🤗   *& more*

Course Summary

Courses
3

Course Duration
36 Weeks (12 + 12 + 12)

Evaluations (Per Course)
2 Quizzes | 3 Trimesters

Break Duration
4 Weeks (2 + 2)

Weekly Commitment
8-10 Hours

Course Syllabus

Module 1: Getting Started with AI and Data

- Coding Foundations: You'll start by learning Python from the ground up (it's the go-to language for AI) and how to manage your code like a pro
- Working with Data: We show you how to take messy, real-world data and clean it up so you can find useful patterns
- The Math Part: We don't just give you formulas; we help you understand the logic behind how machines actually learn
- Your First Models: You'll build your own basic AI models that can make simple predictions based on data you've collected

Module 2: Mastering Machine Learning

- Business Predictions: Learn the techniques companies use to predict everything from sales trends to customer behavior
- Advanced Logic: You'll move on to more complex "tree" models that can handle thousands of different data points at once
- Brain-like Networks: We'll introduce you to Neural Networks—the tech inspired by the human brain—and show you how to build them using PyTorch
- Professional Delivery: It's not enough to just write code; you'll learn how to package your AI so it can run on any computer or website

Module 3: The Future of AI and Deep Learning

- Vision and Language: Explore how AI "sees" images and understands human speech, moving from simple text to complex conversations
- The World of ChatGPT: Dive into Large Language Models (LLMs). You'll learn how they work and how to customize them for your own specific needs
- Smart AI Agents: We'll show you how to build "agents" that don't just talk but can actually perform tasks and solve problems on their own
- Generative Art and More: Finish by exploring how AI creates brand new content, like images and text, using the latest generative technologies

Due to the evolving nature of the industry expectations and partner institute feedback, some syllabus aspects may change. Any updates will be communicated during the Inauguration Session(s) or at the start of the relevant module.

Meet our Instructor Team

Dr. Surya Prakash
Professor, Department of Computer Science & Engineering, IIT Indore

Prof. Surya Prakash is a distinguished academic with over 12 years of experience in teaching and research, dedicated to nurturing some of the brightest young minds in computer science. He has been an integral part of IIT Indore's growth and served as Head of the Department of Computer Science & Engineering from 2017 to 2020, where he played a key role in shaping the department's academic and research direction.

His research expertise lies in biometrics, with a strong focus on ear biometrics, facial recognition, and biometric database indexing. Prof. Prakash has contributed significantly to the advancement of secure and efficient human identification systems, with a particular emphasis on leveraging deep learning techniques for biometric recognition. His work bridges fundamental research and real-world applications, creating impact in areas such as security, authentication, and AI-driven recognition systems.

Varun Raste
Software Engineer, ByteDance

A seasoned Analytics Professional with 5+ years of experience in Machine Learning, Data Science, and CPG Consulting, skilled in fraud modeling, time series forecasting, and Python automation. An active mentor and course creator on Coursera and Campus X, specializing in Python, Generative AI, and Data Science. An internationally rated chess player passionate about trekking, writing, and exploring data-driven solutions.

Admission Process

Clear Qualifier Test
Clear the qualifier test to be eligible for the program.

Complete Counselling
Only shortlisted candidates go through the counselling process.

Start Learning
Learn from India's top educators and stand out from the crowd.

Fees Structure

Qualifier Test Fee (Non-Refundable)	₹99

	Option 1	Option 2
	Upfront	**EMI** Through our NBFC partners
Secure Seat Fee (Non-Refundable)	₹4,000	₹4,000
Programme Fee (Non-Refundable)	₹51,085	₹6,527 x 9 months
Total	₹55,085*	₹62,743*

*GST at 18% extra, as applicable