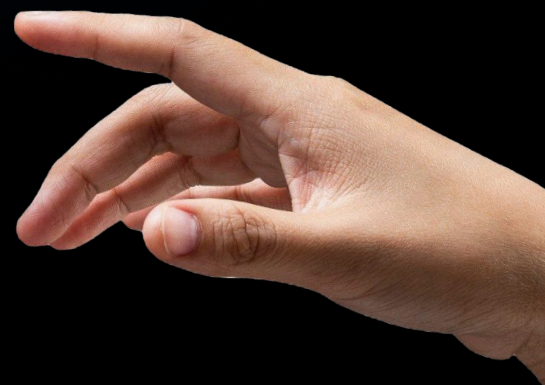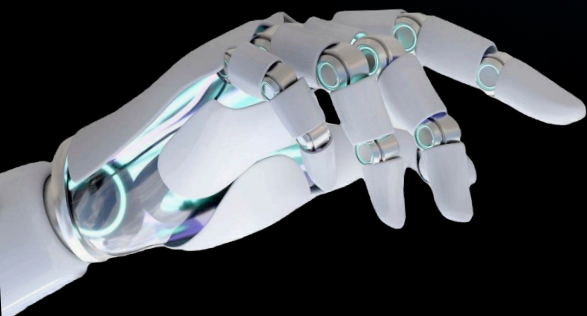भारतीय प्रौद्योगिकी संस्थान पटना
**Indian Institute of Technology Patna**

LEARN FROM THE WORLD'S BEST PRACTITIONERS

**6-MONTH**

# GENERATIVE AI FOR WORKING PROFESSIONALS CERTIFICATE PROGRAM

Learn **50+ AI tools**, create AI-powered apps without coding, and gain job-ready skills!

भारतीय प्रौद्योगिकी संस्थान पटना
Indian Institute of Technology Patna

# Rankings and Recognition of IIT Patna

Ministry of Education
Government of India

**CS**
#1 in Asia
#13 in Asia in NLP
csrankings.org*

**INDIA TODAY**
#1 in India Today's
MDRA Ranking
2024*

**nirf**
#21 National
Institutional
Ranking Framework

**QS UNIVERSITY RANKINGS BRICS**
#106 in Brics QS
University
Rankings

**THE Times Higher Education**
#117 in Times Higher
Education Young
University Rankings

# Director's Message

Dear Future Innovators,

Welcome to the **Professional Certificate Program in Generative AI for Working Professionals** at the IIT Patna—a program meticulously crafted to equip both technical and non-technical professionals with the skills and expertise to excel in today's AI-driven landscape.

In alignment with PM Narendra Modi's vision, India is committed to the responsible and ethical use of AI. Our program embodies this commitment, ensuring that the transformative power of GenAI is harnessed ethically and inclusively.

This program empowers you to not only understand the potential of Generative AI but to harness it for real-world impact — whether you are a tech expert aiming to advance your skill set or a non-tech professional looking to enhance decision-making and innovation in your field.

You will learn from world-class mentors delivering live lectures from global AI giants such as Google, Microsoft, and OpenAI, who bring unmatched insights and practical experience to help you apply AI in your career. You will gain hands-on exposure through live projects, case studies, and collaborative learning designed to make AI actionable and relevant to your professional journey.

## Here's why this program is for every working professional:

- For non-tech professionals: You'll learn how to optimize workflows, boost productivity, and make informed strategic decisions using AI.
- For tech professionals: You'll master advanced Generative AI techniques to create groundbreaking solutions and accelerate your expertise.

Generative AI is democratizing innovation, making it possible for anyone with the right knowledge to build impactful products and lead in their domain. By joining this program, you're taking a bold step toward becoming AI-powered—ready to stand out, lead, and drive meaningful change in your career and industry.

I invite you to immerse yourself in this journey—ask questions, collaborate with your peers, and leverage the expertise of our distinguished faculty. Let's unlock the limitless potential of Generative AI and shape the future together.

**Welcome aboard! Your journey to transformation starts now.**

*Warm regards,*
**Prof. T.N Singh**
Director, Indian Institute of Technology Patna

# Why Learn Generative AI with us?

### Leverage the IIT Patna Edge

Get certified in AI by one of India's leading tech institutions.

### Master Generative AI Tools

Build expertise in GPT, GANs, and more with real-world applications.

### AI Project Portfolio:

Create industry-ready projects to showcase your skills with an edge of GenAI everywhere.

### Career Support:

Get guidance on resumes, LinkedIn, and job opportunities in an AI first world.

### Leadership Skills:

Learn to lead AI initiatives and stay ahead in the tech landscape.

### Perfect for Techies & Non-Techies:

GenAI is for everyone and that's how we have designed the curriculum as well.

### Completely Application Based:

Every module is followed up by a practical project which you can implement and learn faster.

# Curriculum vetted by
## Mentors working at leading AI companies like

**OpenAI**  **NVIDIA.**  **Microsoft**  **Google**

**CISCO**  **Deloitte.**  **X1**  **& many more..**

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# Learn from people who are building the future of GenAI

**Natasha Ahmed**
NVIDIA.

**Shyamal Anadkat**
OpenAI

**Gyanendra**
Google

**Aakash**
lenskart

**Babith**
Microsoft

**Muthu**
ORACLE

**Ravi Prakash**
Ex: Morgan Stanley

**Soumalya Seal**
cleartrip

**Karan Rana**
SWIGGY

# About Generative AI ✦

Generative AI is a branch of Artificial Intelligence that creates text, images, music, and more by learning patterns from existing data. Its ability to generate original content has made it increasingly popular across various fields.

# Why take GenAI seriously?

Artificial Intelligence (AI) is significantly affecting the job market, with estimates suggesting that up to 300 million full-time jobs could be displaced globally by 2030, according to a report by Goldman Sachs.

# Who is this program for?

- ✔ Marketing Professional
- ✔ Operations Professional
- ✔ Leader
- ✔ Data Professional
- ✔ Designer
- ✔ Coder / Developer
- ✔ Business Owner
- ✔ Product Manager

# Professional Certificate in Generative AI for Professionals

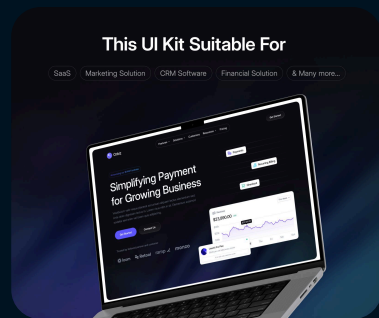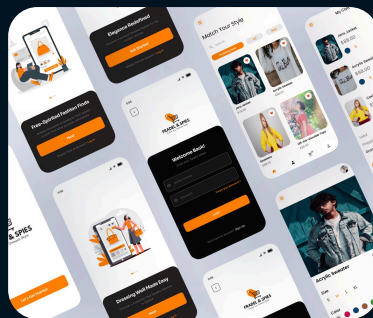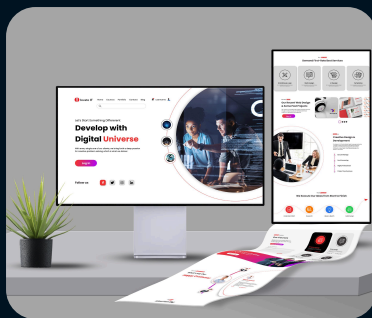**Duration:** 6 months (online, part-time)

## O b j e c t i v e :

Upon completion, participants will be able to:

- Master Generative AI fundamentals and applications
- Build AI-powered solutions with minimal coding
- Implement automation systems using AI
- Create and manage AI agents
- Develop industry-specific AI applications
- Monetize AI skills professionally

## No Coding Experience Required:

Build an app by the end of the program using AI (Capstone Project)

**Note:** There will be some places where you'll require some level of coding, that will also be taught and covered in the program by the faculty.





# Complete List of AI Tools Covered

Retool · Claude · .bubble · deepseek · OpenAI · Streamlit · Chipp

runway · Eleven Labs · D-iD · make (formerly Integromat) · beautiful.ai · gradio · bolt

text.cortex · Notion · SuperAGI · FIXIE · zapier · HeyGen · LangChain

# Fundamentals of Generative AI and LLMs (4 Weeks)

## Topics:
- Evolution and fundamentals of AI/ML
- Large Language Models architecture
- Prompt engineering and optimization
- LLM applications and use cases

## Essential Tools:
- ChatGPT (Prompt engineering)
- Claude (Analysis and coding)
- Langchain (LLM framework)
- GitHub Copilot (Code assistance)
- OpenAI Playground (API testing)

# Multi-Modal AI (3 Weeks)

## Topics:
- Image generation and manipulation
- Audio and speech processing
- Video generation and editing
- Multi-modal integration

## Essential Tools:
- Midjourney (Image generation)
- DALL-E 3 (Image creation)
- ElevenLabs (Voice synthesis)
- Runway (Video generation
- D-ID (Digital avatars)

# AI Automation and Productivity (4 Weeks)

## Topics:
- Personal task automation
- Business process automation
- Content automation
- Workflow optimization

## Essential Tools:
- Zapier (Workflow automation)
- Make.com (Complex automation)
- Beautiful.ai (Presentations)
- TextCortex (Content automation)
- Notion AI (Documentation)

# AI Agents Implementation (3 Weeks)

## Topics:
- AI agent fundamentals
- Agent development
- Multi-agent systems
- Future trends

## Essential Tools:
- AutoGPT (Agent development)
- LangChain (Framework)
- Fixie.ai (Development platform)
- SuperAGI (Infrastructure)
- Chipp.ai (Marketplace)

# AI App Building (4 Weeks)

## Topics:
- App planning and architecture
- Frontend development with AI
- Backend integration
- Deployment and scaling

## Essential Tools:
- Streamlit (App development)
- Vercel AI SDK (Integration)
- Bubble.io (No-code)
- Gradio (UI creation)
- Retool (Internal tools)

# Domain Applications & Career (4 Weeks)

## Key Industry Applications:

1. Marketing & Sales
- Campaign automation
- Customer analytics
- Content creation
- Lead generation

2. Finance & Banking
- Risk assessment
- Investment analysis
- Fraud detection
- Automated reporting

3. Healthcare
- Patient care automation
- Administrative tasks
- Medical analysis
- Research assistance

4. Education
- Content generation
- Student support
- Assessment automation
- Learning analytics

5. Manufacturing
- ⊘ Production planning
- ⊘ Quality control
- ⊘ Supply chain optimization
- ⊘ Predictive maintenance

# Capstone Project (2 Weeks)

Students can demonstrate the competencies developed in the program by working on (a) A Capstone Project, or (b) A Set of Learn by Doing Assignments. A Capstone Project is the culmination of the learnings by applying what has been learned in a single development effort. The choice of Capstone Project or a Set of Learn by Doing Assignments is provided to the students to enable and empower a set of students who may want to strengthen their competencies through a series of mini-projects (the Learn by Doing Assignments). The amount of effort that either options will require would be the same. While Capstone Project focuses on one single development effort, the Set of Learn by Doing Assignments focuses on several mini-projects.

## Project Options:

1. AI-Powered Business Solution
- ⊘ Customer Service Automation Suite
- ⊘ Smart Document Processing System
- ⊘ AI-Powered Recruitment Assistant

2. Multi-Modal Content Creation Suite
- ⊘ Social Media Content Generator
- ⊘ E-commerce Product Content Creator
- ⊘ Educational Content Generator

3. AI Agent Ecosystem
- ⊘ Personal Productivity Assistant
- ⊘ Market Research Assistant
- ⊘ Content Marketing Ecosystem

4. Industry-Specific Application
- ⊘ Healthcare Patient Management
- ⊘ Real Estate Deal Analyzer
- ⊘ Legal Document Assistant

## Assessment

- Weekly quizzes (60%)
- Capstone project and Set of Learn by Doing Assignments evaluation (40%, tailored for heterogeneous learners with differentiated rubrics)

**Note:** Tool access and features may vary based on provider policies and availability. The program continuously updates tool recommendations based on industry developments.

Add this credential to your LinkedIn profile, resume, or CV

Share it on social media and in your performance review

Certified from a Tier 1 Institute of India

# Program Fees:

# ₹67,560

EMI OPTIONS AVAILABLE

(LIMITED SEATS PROVIDED BY IIT-PATNA)

**Apply for the Program**

**Our refund policy:**

80% BACK BEFORE ONE DAY OF INSTRUCTION.
NIL ON/AFTER THE FIRST DAY OF INSTRUCTION.

# Pre-requisites:

10+2, willingness to learn, and the drive to stay relevant in the AI era.

# Still got questions or doubts?

Please reach out to us at support@iitpatna.co and the team will contact you back.

**Apply Now**

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