



भारतीय प्रौद्योगिकी
संस्थान जम्मू
INDIAN INSTITUTE OF
TECHNOLOGY JAMMU

विद्याधनं सर्वधनं प्रधानम्



INSTITUTE INCUBATION
& INNOVATION COUNCIL
I3C - IIT JAMMU

Powered by
Futureense.uni

IIT Jammu

Institute Incubation & Innovation Council (I3C)

PG Certificate in

Building Professional Agentic AI Applications

with AIOps

Duration

07 Months

Sessions

130 Live
Sessions

Applications

10+ With Live
URLs

IIT Credential

Optional Campus
Immersion

Open to

Early & Mid-Career Professionals



Agents Are Everywhere

You are already using **Agentic AI** today.

Orgs are now leveraging their **virtual employees (AI Agents)** to do complex tasks

Did the **Swiggy support chat** that processed your refund without escalation? An AI agent.



Klarna's AI agent handles 2/3 of their customer service chats, **doing the work of 700 full-time employees.**

Klarna.



The tool that **summarized your 47 unread emails** into 3 action items? An agent.



Comet browser lets you say **'book me a flight to Mumbai next Tuesday under ₹8000,'** and it actually does it.

The tech industry needs people who can build and deploy these applications.

That's what this program teaches.



Why Agentic Application Development?

Traditional software development requires a high skill cap. **Agentic AI flips this.**

With platforms like **n8n, CrewAI, and Relevance AI**, you can build production Applications in hours, not months. The 'coding' is connecting blocks, writing prompts, and designing workflows.

The Skillset Organizations Need

Building professional agentic applications requires a specific combination of skills

1 Visual Workflow Design

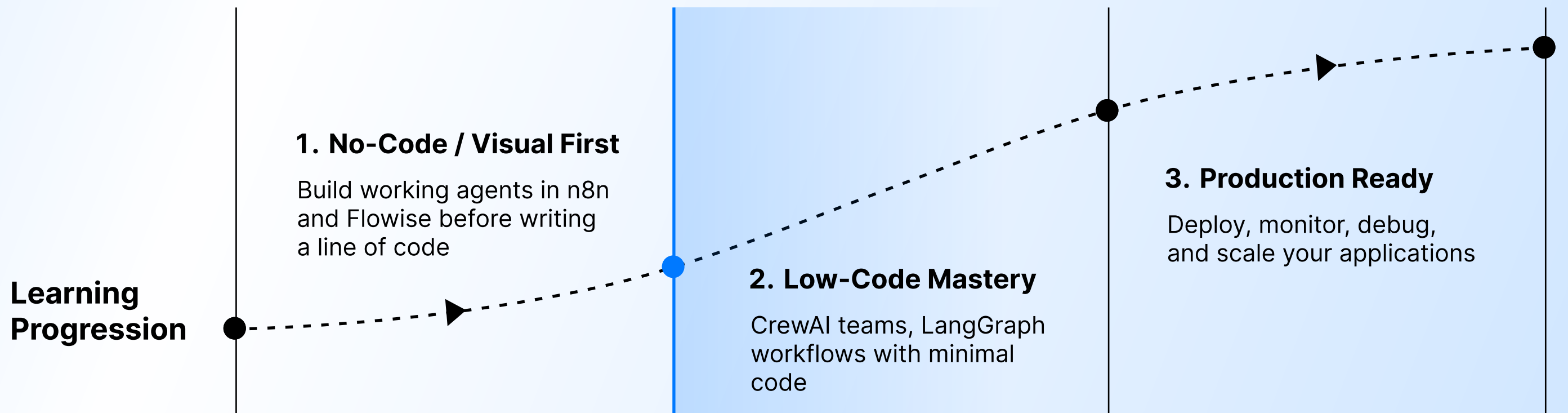
2 Agent Orchestration

3 Agentic RAG

4 Production & AIOps

This is the first program that covers all four

the complete stack for professional agentic AI development.



Application building skills + IIT credential = market-ready portfolio

Your 7-Month Journey

MONTHS 1-2: FOUNDATIONS & FIRST APPLICATIONS

Module 1: Agent Foundations (No-Code First)

Understand how modern AI agents think, act, and coordinate, before writing heavy code.

- > Agent architectures: ReAct, Plan-Execute, tool-calling patterns & memory systems
- > Prompt engineering for agents: structuring goals, tools, and reasoning paths
- > Designing reliable agent workflows using n8n and LangSmith
- > Connecting agents to APIs, tools, and external systems

You Build: Research Assistant, Email Triage Agent, Meeting Scheduler, Customer FAQ Bot - 4 working agents demonstrating end-to-end workflows.

Module 2: Agentic RAG & Intelligent Retrieval

Learn how enterprise-grade AI systems retrieve, reason, and self-correct over large knowledge bases.

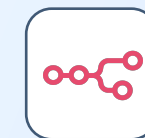
- > Self-RAG, corrective RAG & intelligent query routing strategies
- > Hybrid search, reranking, and chunking optimization techniques
- > Multi-source retrieval pipelines with structured & unstructured data
- > Handling edge cases, failures, and hallucinations in retrieval systems

You Build: HR Policy Assistant (100+ documents), Product Documentation Bot, Legal Document Analyzer, Internal Knowledge Base, production-style RAG systems.

Tools you Learn



LangSmith



n8n

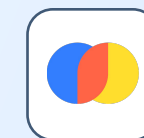


OpenAI GPT-4



Python Basics

Tools you Learn



ChromaDB



Cohere Rerank



Flowise



LlamaIndex



Pinecone

MONTHS 3-4: MULTI-AGENT SYSTEMS

Module 3: Multi-Agent Orchestration

Move from single agents to coordinated AI teams that plan, delegate, and collaborate.

- > Role-based agent teams and supervision architectures
- > LangGraph state machines for controlled agent workflows
- > Task delegation, shared memory & agent communication protocols
- > Designing scalable, fault-tolerant multi-agent systems

You Build: Content Generation Crew (4 agents), Lead Qualification System, Research Team (LangGraph), Document Processing Pipeline.

Tools you Learn



Agency Swarm



AutoGen



CrewAI



Relevance AI



LangGraph

Module 4: Advanced Agent Application Patterns

Design AI systems that behave safely, predictably, and reliably in production.

- > Guardrails, validation layers & output quality control
- > Error handling, fallback paths & escalation triggers
- > Human-in-the-loop workflows and approval systems
- > Secure agent design with confidence thresholds

You Build: Support Agent with Escalation Logic, Approval Workflow System, Quality Control Pipeline, Secure Agent Architecture.

Tools you Learn



Custom
validators



Guardrails AI



NeMo



Pydantic

MONTH 5: AIOPS & INTELLIGENT AUTOMATION

Module 5: AIOps Fundamentals

Learn how AI systems are monitored, debugged, and auto-remediated at scale.

- > Observability fundamentals: metrics, logs & traces
- > AI-powered log analysis and anomaly detection
- > Incident detection, alerting & automated remediation workflows
- > Designing reliable, self-healing systems

You Build: Monitoring Dashboard, Log Analysis Agent, Incident Response System, System Health Reporter.

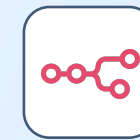
Tools you Learn



Grafana



Loki



n8n



OpenTelemetry



Prometheus



PagerDuty

MONTHS 6-7: PRODUCTION DEPLOYMENT & CAPSTONE

Module 6: Production Deployment for AI Systems

Ship AI applications the way real companies do, securely, scalably, and cost-efficiently.

- > Containerization and cloud deployment for AI workloads
- > Production tracing, rate limiting & cost optimization
- > CI/CD pipelines for AI applications
- > Monitoring, rollback & reliability patterns

You Build: Production Agent API, Monitoring Dashboard, CI/CD Pipeline, Cost Tracking System.

Tools you Learn



Agency Swarm



AutoGen



CrewAI







Relevance AI



LangGraph

> CAPSTONE PROJECT

Bring everything together into one production-grade AI system.

-  End-to-end system architecture & technical documentation
-  End-to-end testing and cloud deployment
-  Integration of agents, RAG pipelines & AIOps
-  Final demo and portfolio presentation



→ You Build

One flagship, production ready AI system combining **Multi-Agent Architecture + RAG + AIOps**, your portfolio centerpiece.

Total Portfolio Output

10+ Applications

With live URLs

5 Case Studies

Production analysis




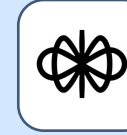





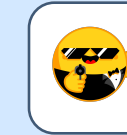

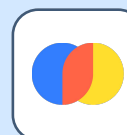

















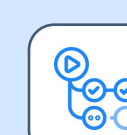
1 Flagship Capstone

Portfolio centerpiece

Tools & Technologies

30+ tools - the stack used by teams building agentic applications in production.

Career Outcomes

No-Code Platforms	 n8n	 Flowise	 Relevance AI	 Voiceflow	 Botpress
Agent Frameworks	 CrewAI	 LangGraph	 AutoGen	 Agency Swarm	 Smolagents
RAG & Vector DBs	 LlamaIndex	 ChromaDB	 Pinecone	 Qdrant	 Cohere Rerank
LLM Providers	 OpenAI GPT-4	 Claude	 Gemini	 Mistral	 Groq
AIOps Stack	 Prometheus	 Grafana	 Loki	 OpenTelemetry	 LangSmith
Deployment	 Docker	 FastAPI	 Railway	 Render	 GitHub Actions

AI Application Developer

Build agentic applications for enterprises

Salary Range*

₹12-45+ LPA

AI Automation Engineer

Design n8n/Relevance AI workflows

₹10-35+ LPA

GenAI Solutions Engineer

End-to-end AI solutions for clients

₹18-55+ LPA

LLMOps Engineer

Deploy, monitor, scale AI systems

₹18-60+ LPA

*Based on LinkedIn/Naukri data, Dec 2025. Product companies and global roles pay higher.

Who Should Apply

Final Year Students

B.Tech / B.E. / BCA / MCA

Enter the market with skills in high demand and low supply

Early Career Professionals

0-3 Years Experience

Transition into AI application development from adjacent roles

Mid-Career Professionals

3+ Years Experience

Lead AI initiatives with domain expertise from your industry

Adjacent Professionals

Non-Tech with Dev Exposure

Product managers, analysts with application lifecycle understanding

Prerequisites

B.Tech

BE

BCA

M.Sc.

MCA

with 50%+ aggregate

Basic understanding of application development or some programming exposure



Familiarity with AI tools (ChatGPT, Claude) as a user



What You Graduate With

10+

Applications
With Live URLs

05+

Case Studies
Production Analysis

01

Flagship Capstone
Portfolio Centerpiece

IIT Jammu

Certificate



Program Details



Duration

7 months (28 weeks) | **130** contact hours



Weekly Commitment

15-20 hours (live sessions + self-study
+ project work)



Format

Live online sessions + Campus immersion
at **IIT Jammu**



Certificate Issued By

IIT Jammu through I3C-IIT Jammu, in
collaboration with Futureense.

Fee Structure



Program Fee

₹84,000 + GST



Application Fee

₹5,000



Campus Immersion Fee

₹10,000 (approximately)

Admission Process



Apply online and complete a pre-screening assessment



Pay Application Fee (₹5,000)



Appear for **Online Pre-screening Test**



Receive the offer letter and pay the program fees



Begin program

Program Director

Prof. Suman Banerjee

Assistant Professor

Prof. Suman Banerjee is a faculty member and researcher in Computer Science with a strong academic grounding in algorithms, graph-based systems, and data-centric computing. His work focuses on understanding and designing efficient computational frameworks for large-scale, evolving networks, with particular emphasis on graph structures, complexity, and data management challenges in modern systems.



With extensive experience across premier technical institutions in India, Prof. Banerjee brings a research-led, systems-first perspective to teaching. His academic approach bridges theoretical foundations with practical problem-solving, enabling learners to develop deep algorithmic thinking and a rigorous understanding of data and network-driven systems. As Program Director, he plays a key role in shaping a curriculum that is conceptually strong, analytically rigorous, and aligned with real-world computational challenges.

Learning Outcomes

Agentic Application Development

Build agentic AI applications that plan, reason, use tools, retain memory, and execute multi-step workflows across real-world business use cases.

Agentic RAG Pipelines

Design reliable RAG pipelines using hybrid retrieval, reranking, self-correction, and multi-source routing to connect enterprise data with agent reasoning.

Multi-Agent Orchestration

Orchestrate multi-agent systems with role-based teams, task delegation, shared memory, and conditional workflows using modern agent frameworks.

Production AIOps & Observability

Apply AIOps to monitor, detect anomalies, automate incidents, and maintain reliability using metrics, logs, traces, and alert-driven workflows.

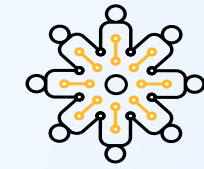
Deployment & Scaling of AI Systems

Deploy agentic AI systems with containerization, CI/CD pipelines, tracing, cost tracking, and production-grade APIs on cloud platforms.

Portfolio & Capstone Outcomes

Graduate with 10+ live applications, multiple case studies, and a flagship capstone demonstrating end-to-end ownership from design to production.



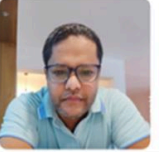






















Futureense Leadership Council



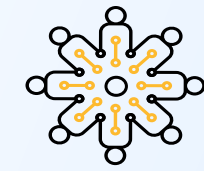
futureense
leadership
council

Co architects, Professors of Practice and Mentors of the Program

This is India's first-ever AI-driven Academic Think Tank - something no one has ever done before. We've brought together the best minds in the industry to guide and mentor our programs, giving students a hands-on, real-world experience that sets them apart.





















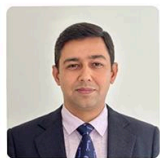







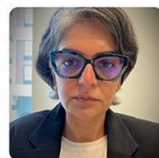









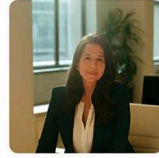


















 <p>Divesh Singla Vice President, Global Operations and Head, APAC SIGNANTHEALTH</p>	 <p>Alok Tiwari Director Of Analytics JUNGLEE GAMES</p>	 <p>Anand Das Chief Digital & AI Officer TVS</p>	 <p>Kaushik Das Managing Director Catalyst</p>	 <p>Anupam Gupta Independent Consultant- AI/ ML Product Development amplifyhealth</p>
 <p>Ankit Mogra Director - Insights & Analytics ATHER</p>	 <p>Nitin Srivastava Global Head of Data and Analytics Dr. Martens</p>	 <p>Muthumari S Global Head of Data & AI Studio brillio</p>	 <p>Shrisha Ray Director of Engineering THOMSON REUTERS</p>	 <p>Aditya Khandekar President Corridor Platforms</p>
 <p>Ishu Jain Head Of Central Analytics Myntra</p>	 <p>Pankaj Rai Group Chief Data and Analytics Officer KOITA BIRLA GROUP</p>	 <p>Nithya Subramanian Senior Director Data and AI COE BEST BUY</p>	 <p>Pankaj Srivastava Partner pwc</p>	 <p>Saurabh Agarwal Chief Executive Officer DAJOM</p>
 <p>Satyakam Mohanty Founder & Managing Partner wyser</p>	 <p>Supria Dhanda Co-Founder & Managing Partner wyser</p>	 <p>Madhu Hosadurga Global Vice President, Enterprise AI Schneider Electric</p>	 <p>Saurabh Kumar Director - Data Engineering LOWE'S</p>	 <p>Sharmistha Chaterjee Head of Software and Systems Engineering IBM</p>
 <p>A V Rahul Director, Analytics Barracuda.</p>	 <p>Tushar Sahu Director Engineering, Google Google</p>	 <p>Swati Jain Partner - Digital, AI & Analytics, Deloitte Deloitte.</p>	 <p>Madhurima Agarwal Managing Director -Microsoft for Startups Microsoft</p>	 <p>Bhargab Dutta Chief Digital Officer, Centuryply CENTURYPLY</p>

Futureense Leadership Council



futureense
leadership
council

↘ Co architects, Professors of Practice and Mentors of the Program

 <p>A V Rahul Director, Analytics </p>	 <p>Arvind Balasundram Executive Director, Commercial Insights & Analytics </p>	 <p>Ashish Dabas Vice President </p>	 <p>Praveen Sathyadev Head Business Growth (VP) - Analytics, Insights and AI </p>	 <p>Srinu Oduru Head of IT Delivery and Operations </p>
 <p>Akshay Kumar Research & Analytics Leader </p>	 <p>Anirban Nandi Head of AI Products & Analytics (Vice President) </p>	 <p>Indrani Goswami Associate Director </p>	 <p>Vishal Nagpal Director of Data and AI </p>	 <p>Sumon Mal Director Engineering </p>
 <p>Tushar Chahal Chief Technology Officer </p>	 <p>Ruchika Singh Director, Data Science & Insights </p>	 <p>Krithika Muthukrishnan Chief Data Science Officer </p>	 <p>Monica S Pirgal Chief Executive Officer </p>	 <p>Deepa Mahesh Head - Analytics, BPS </p>
 <p>Gaurav Srivastava Analytics Business Intelligence Leader </p>	 <p>Arpit Agarwal Data Science Manager </p>	 <p>George Joseph Global head of analytics, customer experience - support operations </p>	 <p>Pramod Rawat Director </p>	 <p>Vidhi Chugh Head of AI </p>
 <p>Sulabh Jain Chief Analytics Officer </p>	 <p>Ashish Kulkarni Director Applied AI </p>	 <p>Ashutosh Shinde Senior Director of Software Engineering </p>	 <p>Biju Kallepilli Senior Director </p>	 <p>Satish Padmanabhan Change and Strategy Leader </p>
 <p>Monishankar Hazra Sr Director - Technology </p>	 <p>Radhika Menon Senior Director - Head AI Delivery </p>	 <p>Nishant Chandra Industry Copilot Leader & Head </p>	 & More	

AI Clinic by FutureSense

Build Production-Grade Agentic Systems

Work on real-world problem statements involving agent orchestration, intelligent automation, monitoring, incident response, & system reliability, not demos or simulations.



Enterprise AIOps & Observability Stack

Gain hands-on experience with industry-used tools such as Prometheus, Grafana, Loki, OpenTelemetry, LangSmith, CI/CD pipelines, and cloud deployment platforms.

Live, Deployed AIOps Applications

Design and deploy 10+ agentic applications, including monitoring dashboards, log analysis agents, incident automation systems, and production APIs with live URLs.



Mentorship from IIT & Industry Practitioners

Each project is guided by experienced Industry Practitioners, ensuring architectural rigor and production relevance.

End-to-End System Ownership

Learn to take agentic systems from



FutureSense Bridge Course

Before the core Agentic AI with AIOps program begins, every learner undergoes a **structured Bridge Course** designed to create a strong and uniform foundation across diverse academic and professional backgrounds. This ensures that you enter the program prepared to understand, build, and apply large and small language models in real-world scenarios.

Where you are now

Enrolled

BRIDGE (DAY 1 READY)

Program Starts

Bridge Course Focus

Building essential technical clarity and applied readiness so learners can seamlessly transition with confidence.

What You'll Learn

- Programming Foundations
- GenAI, Agentic AI & Prompt Engineering
- Databases with MySQL
- Cloud Foundations

Outcome

Begin the program with strong fundamentals, hands-on confidence, and the technical readiness required to grasp Agentic AI Applications with AIOps concepts and perform effectively from Day 1, irrespective of prior experience.



Career Assistance by FutureSense

01

Profile, Narrative & Resume Building

- > Craft a recruiter-ready identity with optimized resumes, LinkedIn profiles, and a strong career narrative.

02

Career-Specific Training

- > Develop job-ready skills with role-focused training, capability tests, AI tools workshops, and continuous upskilling to match real hiring expectations.

03

FutureSense Job Board - Exclusive Opportunities

- > Access curated, pre-vetted roles before they hit public portals, with priority visibility for FutureSense learners.

04

Interview Playbooks & Cheat Sheets

- > Get insider interview guidance with structured playbooks: FAQs, sample answers, frameworks, recruiter insights, and round-wise preparation.

05

Mock Interviews with Experts

- > Experience real interview simulations with personalized feedback from mentors, industry leaders, and FLC members.

06

Mentor Referrals & Networking

- > Unlock referral advantages, insider recommendations, alumni-driven opportunities, and FLC mentorship that accelerates your career entry.

07

Salary Negotiation Support

- > Get guidance on positioning, benchmarking, negotiation strategy, and communication to secure the compensation you deserve.



Eligibility & Admission Process

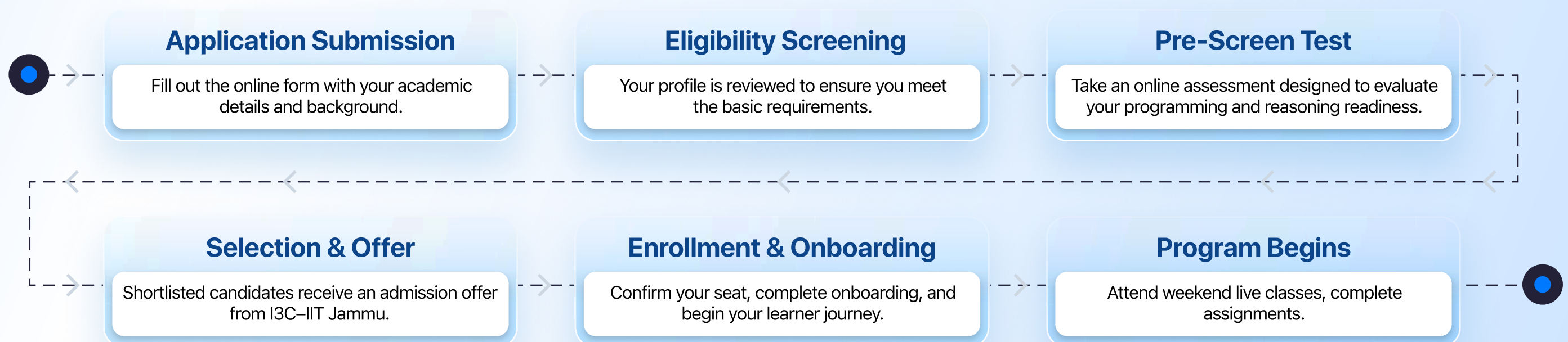
Who Can Apply?

- This program is open to learners who want to move beyond basic AI/ML concepts.

Eligibility Requirements

- B.Tech / B.E. / BCA / M.Sc. / MCA or equivalent degree with a minimum of 50% aggregate, as specified in the program prerequisites.
- Open to candidates from engineering, computer science, or related technical disciplines with foundational exposure to computing.
- Python proficiency is required. Familiarity with AI tools such as ChatGPT or Claude is expected for effective learning.
- Applicants must be prepared for hands-on, project-intensive learning, including system building and deployment-focused assignments.

Admissions Process



Program Details

DURATION

7 months (28 weeks) |
130 contact hours

WEEKLY COMMITMENT

15-20 hours (live sessions +
self-study + project work)

FORMAT

Live online sessions + Campus
immersion at IIT Jammu

CERTIFICATE ISSUED BY

IIT Jammu through I3C–IIT Jammu, in collaboration with FutureSense

Program Fee: ₹84,000 + 18% GST

Application Fee : ₹5,000

Campus Immersion Fee : ₹10,000 (approximately)



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विद्यार्थनं सर्वधनं प्रधानम्

About IIT Jammu

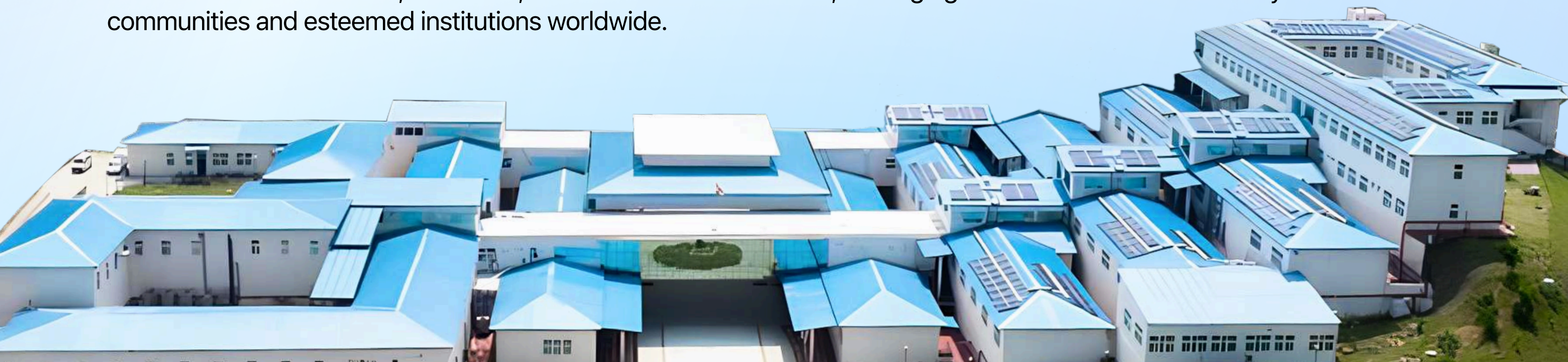
An Institution Built for Innovation and Impact

The Indian Institute of Technology Jammu (IIT Jammu) was established in **2016** under the guidance of **IIT Delhi** and has since emerged as one of **India's Fastest-growing IITs, Focusing on Innovation, Research, and Industry Collaboration.**

IIT Jammu's vision is to create technologists who innovate for India and the world by combining academic excellence with societal relevance. The institute is known for its **Cutting-edge Programs, World-class Laboratories, and Interdisciplinary Approach to Modern Engineering Education.**

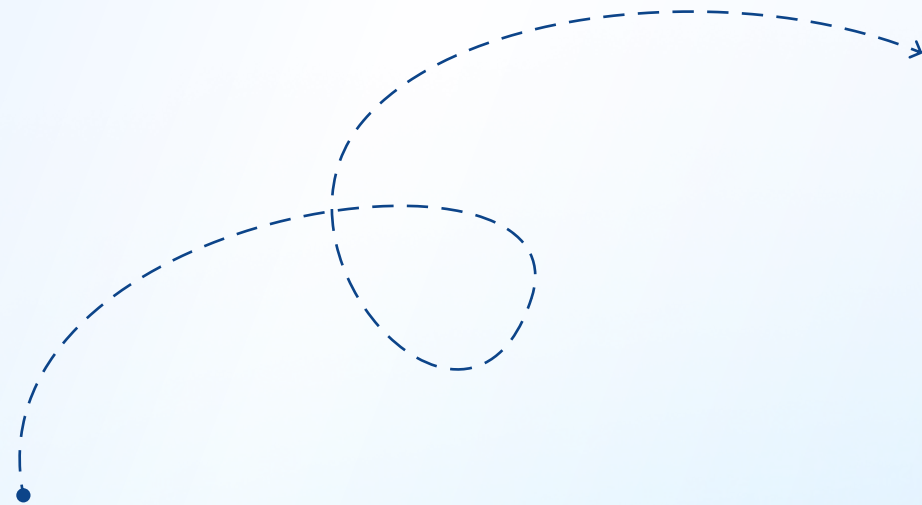
The institute's ethos is characterized by a culture of mutual respect, a melting pot of creativity and collaboration, and a passionate pursuit of innovative problem-solving. The educational systems at IIT Jammu are not just about learning but are a **Comprehensive Experience**, enriched through research that culminates in practicum, reflecting the institute's dedication to developing transformational leaders.

With infrastructure designed to sustain cutting-edge research in thematic areas and a goal to impact at regional, national, and global levels, IIT Jammu is not only an institution but a legacy in the making. It is poised to mentor, support, and innovate for educational institutions, industries, and traditional sectors alike, leveraging its outreach and connectivity with communities and esteemed institutions worldwide.



About I3C

The Institute Incubation & Innovation Council (I3C) is IIT Jammu's Section-8 not-for-profit organization which is responsible for conducting the online certificate programs of IIT Jammu. I3C enables agile, industry-aligned programs that evolve with technology.



WELCOME
MESSAGE



The Institute Incubation and Innovation Council (I3C) – IIT Jammu is honored to conduct the certification programs of IIT Jammu, offering a diverse range of industry-aligned courses that promote innovation, skill enhancement, and professional excellence.

We extend our best wishes to all participants for a fulfilling learning experience and continued success in their academic and professional endeavors.

I3C – IIT Jammu warmly welcomes you to the program and looks forward to your active participation.

With regards,

**Institute Incubation and Innovation Council (I3C)
Indian Institute of Technology Jammu**

About Futureense

Futureense is India's Fastest-growing AI-skilling Company, dedicated to accelerating India's role in global AI development.

With projections from the EY's "India@100" report, indicating that **24.3% of the Incremental Global Workforce** over the next decade will be Indians by 2030, we are committed to positioning India at the forefront of AI evolution.

Our mission is to scientifically map AI talent demand and create scalable, industry-aligned upskilling models that equip Indian professionals with cutting-edge capabilities. By integrating real-world applications with academic excellence, we are building tomorrow's leaders across every possible funnel, shaping the talent that will define tomorrow.

Impact & Ecosystem

3M+

LEARNER
COMMUNITY

70+

UNIVERSITY
COLLABORATIONS

10+

IIT/IIM
PARTNERSHIPS

540+

TRUSTED HIRING
PARTNERS

100+

MENTORS &
EXPERTS

25K+

CAREERS
TRANSFORMED

400+

FUTURENSE TEAM
STRENGTH

65+

ENTERPRISE CLIENTS
ACROSS FORTUNE
500 AND GCCS

Our Four Verticals

Futureense.uni 

Online degree and certificate programs
in partnership with IITs and IIMs.

Futureense  Global

First-of-its-kind study abroad and credit
transfer programs with leading global
universities.

 **Futureense**
SCHOOL OF AI

Co-branded AI-focused undergraduate
programs for select universities,
managed end-to-end.

Futureense.enterprise

Staffing and corporate reskilling
solutions for Fortune 500 companies
and global capability centers (GCCs).



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I3C - IIT Jammu

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IMPORTANT: Program completion requires 75% attendance and successful project submissions. PG Certificate awarded by I3C IIT Jammu upon meeting criteria. Career outcomes vary by individual effort, market conditions, and prior experience. Futureense provides career support but does not guarantee employment. Salary ranges based on LinkedIn and Naukri job posting data, December 2025. Individual results may vary.