भारतीय प्रौद्योगिकी संस्थान भिलाई
Indian Institute of Technology Bhilai

# Executive MTech
# IN
# Artificial Intelligence

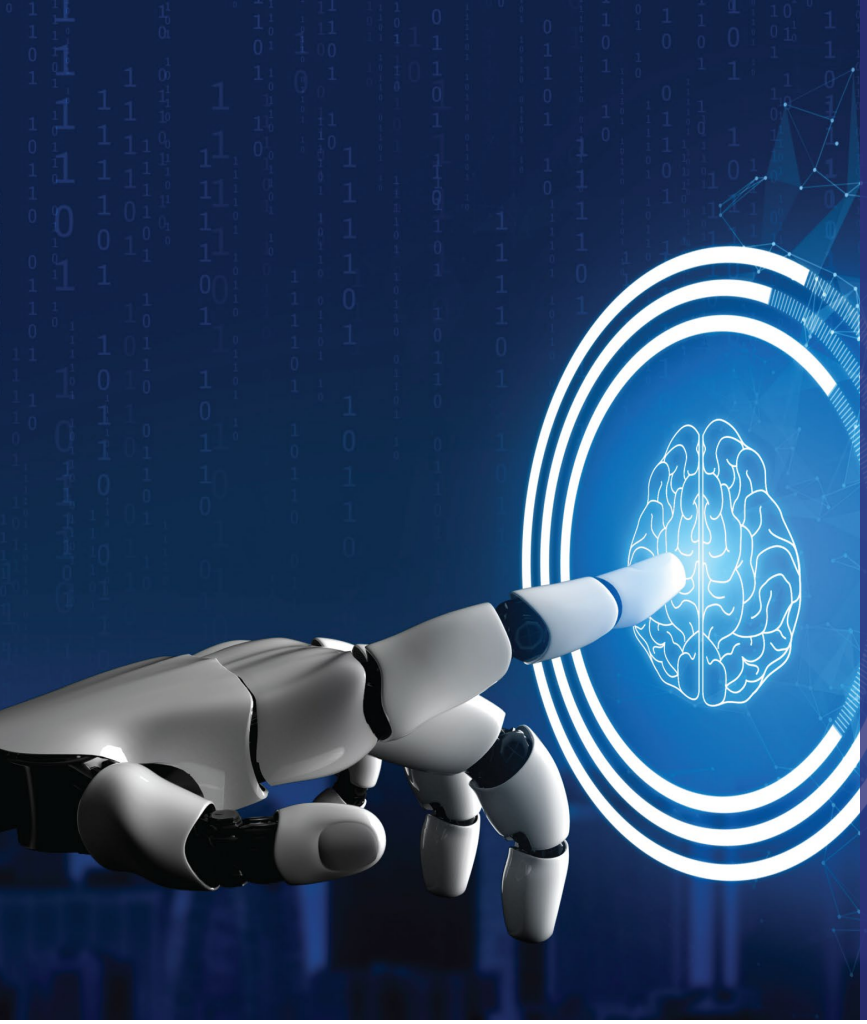
2 Years I Online Immersive Sessions I Graduate from an IIT

## WHY UPSKILL FROM IIT BHILAI?

Indian Institute of Technology (IIT) Bhilai was established in the state of Chhattisgarh by the Ministry of Education in the year 2016.

IIT Bhilai is presently housed in its permanent campus at Kutelabhata, Bhilai, Chhattisgarh.

At IIT Bhilai, we understand the demands of the dynamic corporate landscape, and our Executive MTech programs are meticulously crafted to provide a seamless blend of academic excellence and real-world applicability. Whether you aspire to advance in your current role, switch career paths, or stay ahead of industry trends, our Executive MTech courses offer the strategic edge you need to thrive in a competitive landscape.



## Program Overview

The M.Tech Executive in Artificial Intelligence at IIT Bhilai is designed for seeking to gain advancedknowledge and skills in Artificial Intelligence (AI). The program combines theoretical concepts withpractical applications, enabling participants to design and deploy AI-based solutions for real-worldchallenges. The curriculum emphasizes machine learning, deep learning, natural languageprocessing, computer vision, and AI ethics while fostering innovation and leadership in AI technologies.

The program is structured to be flexible and interactive, offering a blend of online classes, electivecourses, and project-based learning to cater to the needs of working professionals. Graduates will beequipped to pursue roles such as AI researchers, data scientists, and AI consultants.

## Who Can Apply?

- Min 2 years of Experience within preceding 5 Years
- Should have B.Tech/ BE/ M.Tech/ MSc ( In Relevant Field- 4 Semester Program) / MCA (4 Semester Program) / MS Degree (min. 4 Semester Program).
- In the qualifying degree at least 55 percent marks or equivalent 5.5 CGPA/CPI must be there. In case of the candidate belonging to SC, ST, or Persons with Disability (PwD) category, this is relaxed to 50% or equivalent 5.0 CGPA/CPI. For MCA/MSC passed graduates, the percentage score of MCA/MSC would be considered. For BE/BTech Engineering graduates without PG specialization, the percentage score of the undergraduate degree would be considered. For a post graduation in the Engineering field of study, PG score qualification can be considered.
- Selection process will be scheduled post counseling & application process, depending on the number of eligible applications as per seat availability for the program. This entire process will be online.

# DURATION

The nominal duration of the Executive M.Tech. program will be 2 calendar years / 4 semesters (online).

The nominal duration of the Executive M.Tech. program with an equivalency to the regular M.Tech. will be a 5 semesters (3 online, 2 offline). Please contact IIT Bhilai for further details.

# PROGRAM EQUIVALENCY

This is an online Executive M.Tech. degree program, which is not equivalent to the regular M.Tech programs of IIT Bhilai. To get a degree equivalent to a regular M.Tech, the student has to opt for 26 credits offline thesis (at IIT Bhilai) after the 3 rd semester. The offline thesis will be for two semesters (semester 4 and semester 5). The selection for the equivalency program will be based on qualifying the mandatory offline written exam and an interaction conducted by IIT Bhilai.

# PROGRAM STRUCTURE

- Total Credits: 40
- Core Courses: 12-13 Credits
- Elective Courses: 13-14 Credits (if the Campus immersion is opted), otherwise 15-16 credits.
- Campus Immersion Program: 2 Credits (optional)
- Project: 12 Credits (in 4th Semester)

# PROGRAMME OBJECTIVES

- *Acquire a strong foundation in AI principles, methodologies, and tools.*
- *Develop advanced technical skills in AI domains such as machine learning, deep earning, and NLP.*
- *Gain expertise in designing and implementing AI solutions for real-world problems in various industries.*
- *Understand ethical, societal, and governance implications of deploying AI technologies.*
- *Foster innovation and critical thinking to contribute to AI research and advancements.*
- *Build leadership and collaborative skills to lead AI-driven projects and multidisciplinary teams.*

# PROGRAMME HIGHLIGHTS

**Comprehensive Industry-Aligned Curriculum**
Learn the latest in data science and analytics, including machine learning, big data technologies, and predictive modeling, ensuring relevance to modern industry demands.

**Flexible Online Learning for Professionals**
The fully online mode allows you to balance your work commitments while advancing your expertise, with live sessions and self-paced study options.

**Expert Faculty and Industry Mentors**
Gain insights from IIT Bhilai's distinguished faculty and experienced industry professionals, combining academic excellence with real-world expertise.

**Prestige**
Certification from one of India's most renowned institutions, boosting your professional credentials.

**Career-Focused Outcomes**
Equip yourself with in-demand data science skills and earn an IIT Bhilai certification, giving you a competitive edge and unlocking new career opportunities in the data-driven economy.

**Virtual Instructor-Led Training**
Learn through Virtual Instructor-Led Training (VILT)

# PROGRAM CURRICULUM

## Semester - I

| Course Code | Course Name | L | T | P | C | Category |
|---|---|---|---|---|---|---|
| AI01 | Introduction to Artificial Intelligence | 2 | 1 | 0 | 3 | Core Course |
| AI02 | Mathematics & Programming for Artificial Intelligence | 3 | 1 | 0 | 4 | Core Course |
| AI03 | Machine Learning | 2 | 0 | 2 | 3 | Core Course |

**Semester - I - Total Credits - 10**

## Semester - II

| Course Code | Course Name | L | T | P | C | Category |
|---|---|---|---|---|---|---|
| AI04 | Deep Learning | 2 | 0 | 2 | 3 | Core Course |
| AIEXX | AI Electives-1 | 3 | 0 | 0 | 3 | Elective 1 |
| AIEXX | AI Electives-1 | 3 | 0 | 0 | 3 | Elective 2 |

**Semester - II - Total Credits - 9**

## Semester - III

| Course Code | Course Name | L | T | P | C | Category |
|---|---|---|---|---|---|---|
| AIEXX | AI Electives-2 | 3 | 0 | 0 | 3 | Elective 3 |
| AIEXX | AI Electives-2 | 3 | 0 | 0 | 3 | Elective 4 |
| AIEXX | AI Electives-2 | 3 | 0 | 0 | 3 | Elective 5 |

**Semester - III - Total Credits - 9**

## Semester - IV

| Course Code | Course Name | L | T | P | C | Category |
|---|---|---|---|---|---|---|
| AIP01 | Capstone Project | 0 | 0 | 24 | 12 | M Tech Project |
| OR | | | | | | |
| AIT01* | Thesis | x | x | x | 12 | M.Tech Thesis |

**Semester - IV - Total Credits - 12**

## Semester - V

| Course Code | Course Name | L | T | P | C | Category |
|---|---|---|---|---|---|---|
| AIT01* | Thesis | x | x | x | 14 | M.Tech Thesis |

*** Only for those who have opted for the equivalent degree to the regular MTech Program**

**Semester - V - Total Credits - 14**

**Students registered only for the Executive MTech (Online) Program:**
**Total Credits : 10 (Semester I)+ 9 (Semester II)+ 9 (Semester - III) + 12 (Semester - IV) = 40**

**Students opted for the equivalent degree to the regular MTech Program**
**Total Credits : 10 (Semester I) + 9 (Semester II) + 9 (Semester III) + 12 (Semester - IV) + 14 (Semester V) =54**

## Additional Notes:

**Program Equivalency:** The Executive MTech (Online) Program is not equivalent to the regular offline MTech program at IIT Bhilai.

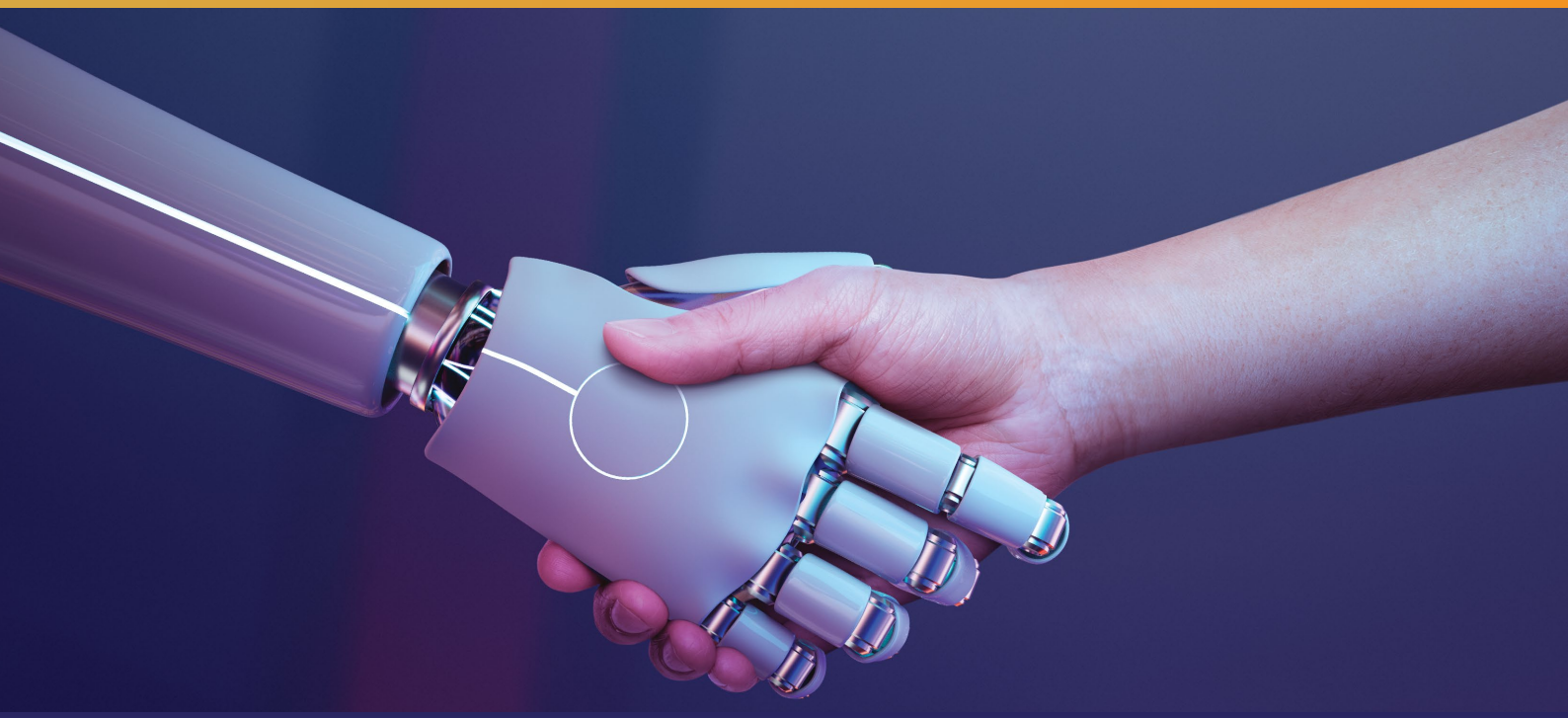
**Thesis Requirements:** To achieve equivalency with the regular offline MTech program, the candidate must complete a total of 26 thesis credits on campus from the fourth semester onwards.

# BUCKET FOR ELECTIVES

| Category | Sem | Course Code | Course Name | L | T | P | C |
|---|---|---|---|---|---|---|---|
| AI Electives - 1 | 2 | AIE01 | Reinforcement Learning | 3 | 0 | 0 | 3 |
| | 2 | AIE02 | Natural Language Processing | 3 | 0 | 0 | 3 |
| | 2 | AIE03 | Computer Vision | 3 | 0 | 0 | 3 |
| | 2 | AIE04 | Systems for AI/ML | 3 | 0 | 0 | 3 |

| Category | Sem | Course Code | Course Name | L | T | P | C |
|---|---|---|---|---|---|---|---|
| AI Electives - 2 | 3 | AIE04 | Learning with Graphs | 3 | 0 | 0 | 3 |
| | 3 | AIE05 | Distributed AI Systems | 3 | 0 | 0 | 3 |
| | 3 | AIE06 | Generative AI | 3 | 0 | 0 | 3 |
| | 3 | AIE07 | Agents and Prompt Engineering | 3 | 0 | 0 | 3 |
| | 3 | AIE08 | AI for Industry (IoT, Robotics, UAV) | 3 | 0 | 0 | 3 |
| | 3 | AIE09 | Security and Privacy of AI | 3 | 0 | 0 | 3 |

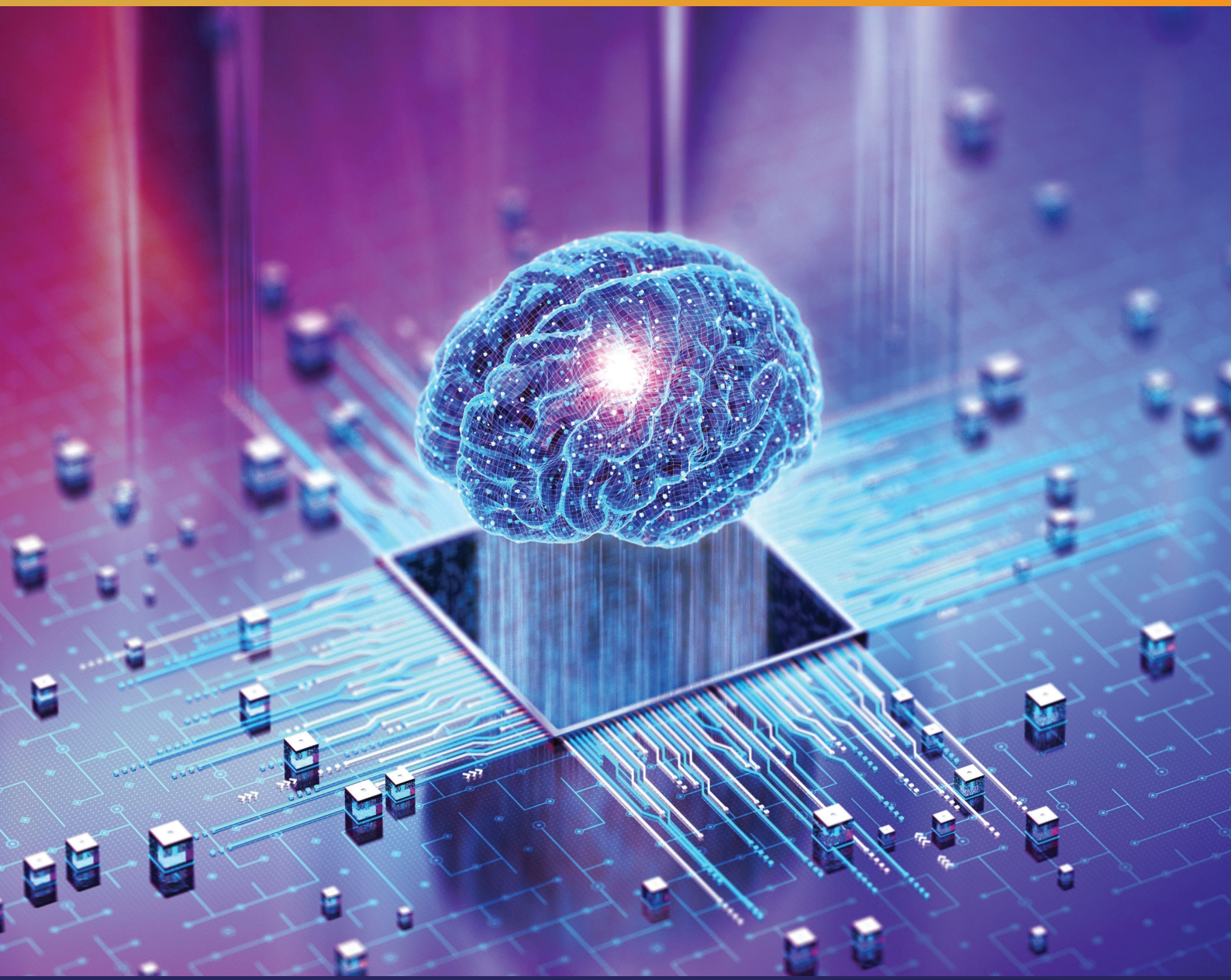
**Electives will be floated based on the availability of faculty members. This list may be updated from time to time and change batch-wise.**



# Evaluation

- Students will be evaluated in each semester. In addition to continuous online evaluation (Mid semester exam / Quiz / assignment / assessment) in the core/elective courses running in the first three semesters, the end semester exams will be offline* proctored exams. The end-semester offline exams in the first three semesters will preferably be conducted at the IIT Bhilai campus to give the candidates an opportunity to visit and explore the IIT Bhilai campus. This may also be clubbed with other activities such as document verification, campus immersion, project team formation, and interaction with the mentors/supervisors, etc. Exams may be organized at other IIT Bhilai Centers, subject to higher demand.

- The weightage of online evaluation and end-semester exams will be in the proportion of 40:60. To pass a course, a student must attain a minimum of 40% marks in the total marks.



## CORE LEARNING OUTCOMES

- Demonstrate proficiency in core AI technologies, including neural networks, computer vision, and NLP.
- Analyze and solve complex problems using AI tools and techniques with an emphasis on optimization.
- Design, develop, and deploy AI-based systems while ensuring scalability and efficiency.
- Adhere to ethical standards and address societal impacts of AI applications.
- Effectively communicate AI concepts and solutions to stakeholders and multidisciplinary teams.
- Exhibit lifelong learning abilities to stay updated with emerging AI technologies and trends.

# PROGRAM ADMISSION JOURNEY

**STEP 1:**
Fill up an online application form, upload the required documents and submit application

**STEP 2:**
Make the application payment

**STEP 3:**
Shortlisting based on work, and education profile

**STEP 4:**
If shortlisted, you will receive an offer letter from IIT Bhilai

**STEP 5:**
Pay admission confirmation fee within 7 days of receiving the offer letter

Note: The application fee once paid is not refundable. IIT Bhilai reserves the right to conduct the admissions process. By submitting the application, the students agree that any decision regarding Admissions from IIT Bhilai will be final and binding.

# Fee Structure

## Executive MTech in Artificial Intelligence

| | | | | |
|---|---|---|---|---|
| Application Fee (Non-Refundable) | ₹ 5,000/- | | | |
| Fees | Instalment 1 | Instalment 2 | Instalment 3 | Instalment 4 |
| | ₹ 1,05,000/- | ₹ 1,05,000/- | ₹ 1,05,000/- | ₹ 1,05,000/- |
| Total Fees | ₹ 4,25,000/- | | | |

## Cancellation & Fee Refund Policy:

- **Application Fee: Non-refundable.**
- **Course Fee Refund:**

A refund of 90% of the paid course fee will be issued if a request is raised before the Batch commencement date.

No refund will be provided on or after the batch commencement date.

क्रम सं./Serial No. 2022/0014 अनुक्रमांक सं./ID No. 12010230

**भारतीय प्रौद्योगिकी संस्थान भिलाई**

शिक्षा परिषद की अनुशंसा पर एवं पाठ्यक्रम की निर्धारित
अर्हताओं एवं शोध को सफलतापूर्वक पूर्ण करने पर

**XYZ शर्मा**

को

**कृत्रिम बुद्धिमत्ता में**
**कार्यकारी मास्टर ऑफ टेक्नोलॉजी**

की उपाधि प्रदान करता है।

संस्थान द्वारा मुद्रांकित यह उपाधि दिनांक अठारह जून दो हज़ार बाईस
को प्रदान की गई।

SAMPLE

**INDIAN INSTITUTE OF TECHNOLOGY BHILAI**

upon the recommendation of the Senate hereby confers

**XYZ Sharma**

With the degree of

**Executive MTech in**
**Artificial Intelligence**

for successfully completing the prescribed program study
and presenting the thesis.

Given this day the Eighteenth of June, Two Thousand Twenty Two
under the seal of the Institute.

| कुलसचिव<br>Registrar | अध्यक्ष, शिक्षा परिषद<br>Chairman, Senate | अध्यक्ष, संचालक मंडल<br>Chairman, Board of Governors |
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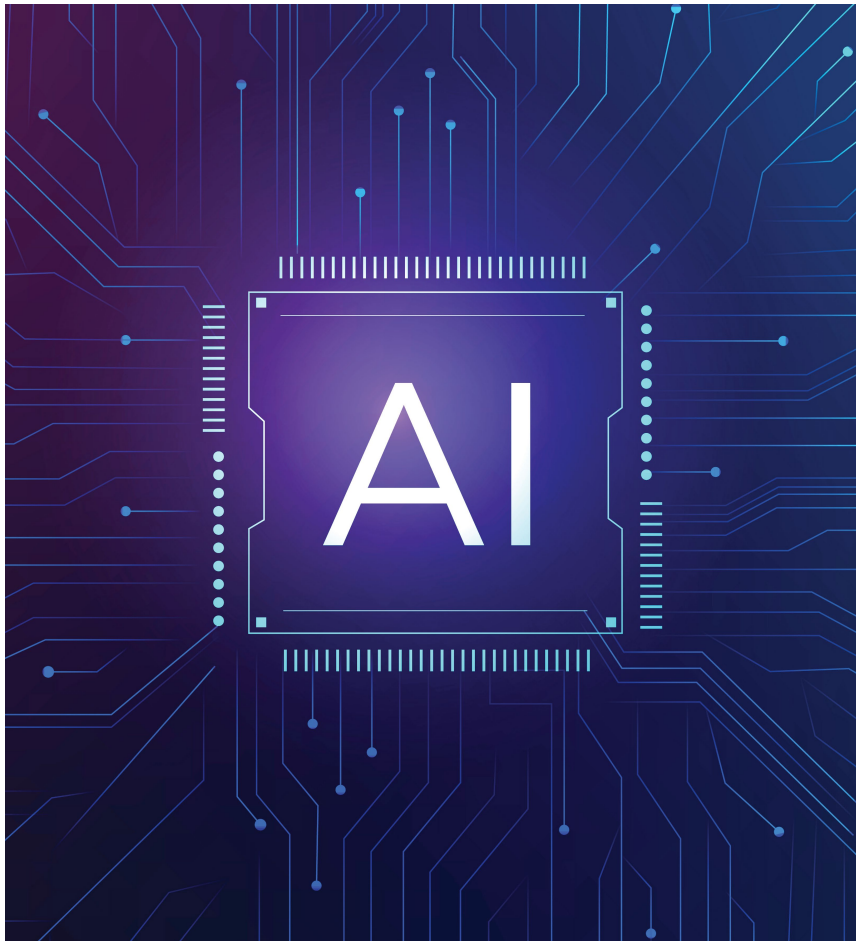

## Get In Touch With Us

For registration and any other information please get in touch with us at admission.iitbhilai@digivarsity.com

**Contact us: 033-4058-6356**