Indian Institute of Technology Patna

Executive
M. Tech in
Artificial Intelligence &
Data Science Engineering

Electives
Big Data / Block Chain

Programme Coordinator
Dr. Asif Ekbal
(ADean Resource & Associate Professor, Department of Computer Science Engineering, IIT Patna)

Overview

AI is set to transform business like never before, creating new opportunities for entrepreneurs, business leaders and workers in every industry. IIT Patna's Executive M. Tech in Artificial Intelligence & Data Science Engineering programme has been designed for professionals across industries, looking to gain hands-on knowledge of AI implementation while building the next generation business models.
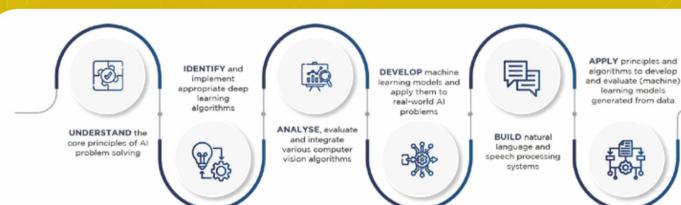
Who is this Programme for?

Early to Mid Level Professionals seeking career growth

This programme is aimed to provide hands-on knowledge of AI implementation especially in the areas of Speech Technologies, Computer Vision and Natural Language Processing to early-career enthusiasts such as:

Data Analysts, Business Analysts, Data Scientists, ML Engineers

Computer Programmers, Developers, Softwarers Engineers

UNDERSTAND the core principles of AI problem solving

IDENTIFY and implement appropriate deep learning algorithms

ANALYSE, evaluate and integrate various computer vision algorithms

DEVELOP machine learning models and apply them to real-world AI problems

BUILD natural language and speech processing systems

APPLY principles and algorithms to develop and evaluate (machine) learning models generated from data

Director's Message

It gives me immense joy to welcome you to the Quality Improvement Program (QIP), the new academic unit in the IIT Patna system. QIP aims to combine technology and management to prepare students to explore a future of possibilities. QIP plays a crucial role in upgrading and enhancing the capabilities and skill sets of pursuing graduates/ graduates and working professionals in technology & management education. With its industry-oriented future-centric curriculum, exceptional faculty, and strong international footprint, QIP has the right ingredients to achieve a leadership position among its peers in the time to come.

IIT Patna will undertake the following activities under QIP: Faculty Development Programme (FDP), Short Term Courses, Knowledge Dissemination Programme, National Summer & Winter Term and Internship (NSWTI), International Summer & Winter Term and Internship (ISWTI), Certificate Programmes, Online Courses and Training Programme for the School Students, Certificate Programmes, Executive Programmes.

I wish QIP and all its stakeholders a purposeful and joyful journey ahead and felicitate all its endeavours. I invite you to be part of this exciting journey and participate in the success of QIP at IIT Patna.

I welcome you to become a part of our story and to form a long-lasting association with the institute.

Prof. T.N. Singh
Director, Chief Academic Mentor, QIP, Indian Institute of Technology Patna

Associate Dean (Resource) & Professor In-Charge

Quality Improvement Program (QIP)
Dr. Asif Ekbal

(ADean Resource & Associate Professor, Department of Computer Science Engineering)

Executive M Tech in Artificial intelligence and Data Science Engineering

Asif Ekbal is an Associate Professor in the Department of Computer Science and Engineering at IIT Patna. He has been working in the broad areas of Artificial Intelligence, Machine Learning and Natural Language Processing since the last 18 years. His research is supported by various Govt bodies (MeitY, SERB etc) and Industries (e.g. Flipkart, Samsung Research, Wipro, Accenture etc). He has been listed in the top 2% scientists published by Stanford University, and is an awardee of Visvesvaraya Young Faculty Research Fellowship (YFRF), Govt of India; JSPS Invitation Fellowship from the Govt of Japan, and Innovative Project Award from the Indian National Academy of Engineering.

Advisory Board Members

Dr. Ravi P. Singh
Secretary General,
Quality Council of India
(September 2014-till date)

UG and PG from BHU, Varanasi, Ph.D and Postdoctoral experience in University of Western Ontario at London, CANADA. Dr Singh has experience in research, teaching and administration for the past more than 18 years in Professor Scale or above.

Past Positions:
Director, Regional Services Division (RSD), IGNOU, Maidan Garhi, New Delhi-110068 (2011-12); Founder-VC, Sharda University (2009-11); Dean, Punjab Technical University (2004-09); Associate Dean, PTU, (2003-04); Deputy Director, AICTE (2001-03); Regional Officer of AICTE, Kanpur (1996- 99) and Kolkata (2000-2001); Assistant Director, AICTE (1996-01).

Education:
Ph.D (1994) and Postdoctoral Fellowship in Physics from Canada (1994-95), Gold Medal from BHU in MSc (1989), NET-CSIR qualified (1989) and Topper of Honors Program in Physics (1987).

Prof. Rajeev Srivastava
Professor CSE & Dean (Resource and Alumni Affairs) IIT (BHU), Varanasi

Prof. Rajeev Srivastava is currently working as a Professor in the Dept. of Computer Sc. & Engineering, Head of the Centre for Computing and Information Services (CCIS) and the Dean (Resource and Alumni Affairs), Indian Institute of Technology (BHU), Varanasi. He also served as Head of the Department of Computer Science and Engineering during August'2017-December'2020. He holds the degrees of B.E., M.E., and PhD all in Computer Science & Engineering and possess 23+ years of teaching and research experience. He is a Fellow of Institution of Engineers (India) (FIE), Institution of Electronic and Telecommunication Engineers (FIETE), Senior Member IEEE USA, and Member ACM USA. He has published around 165+ research papers in reputed international journals andconferences, 04research reference books, and 18 book chapters and a patent. He had been the Principal Investigator of research projects funded by MoE, Govt. of India and DRDO, Govt. of India.He has produced 13 PhDs, and 3 PhD thesis submitted and 04 PhDs are ongoing under his Supervision.He serves as Expert Member on different panels of NBA, UGC, UPSC, DRDO, UPPSC, reputed Institute and Universities of the Govt. of India. His research interests lies in the areas of Artificial Intelligence (AI), Machine Learning, Deep learning, Image and Video Processing, Computer Vision, and Computational Bioinformatics.

Prof. H.P. Mathur
Dean and Head
Faculty of Management Studies (Institute Of Management Studies)
Banaras Hindu University, Varanasi

UG and PG from BHU, Varanasi, Ph.D and Postdoctoral experience in Uni - versity of Western Ontario at London, CANADA. Dr Singh has experience in research, teaching and administration for the past more than 18 years in Professor Scale or above.

Current Affiliation:
Dean and Head, Institute of Management Studies, Banaras Hindu University (FMS-BHU)
Chairman, International Centre, Banaras Hindu University
Chairman, Investment Committee, Banaras Hindu University
Chairman, Placements and Corporate Affairs, Institute of Management Studies, Banaras Hindu University (FMS-BHU)
Promoter Director, Atal Incubation Centre- Mahamana Foundation for Innovation and Entrepreneurship- Institute of Management Studies (Supported by Atal Innovation Mission, NITI Aayog, Government of India
Director/Chairman (Non-Executive), Utkarsh Welfare Foundation
Member, Board of Governors, University of Petroleum and Energy Studies, Dehradun
Member, Departmental Advisory Board, National Council of Educational Research and Training
Positions (Held):
Coordinator, Placement Coordination Cell, Banaras Hindu University
Chief, University Employment and Information Guidance Bureau, Banaras Hindu University
Coordinator, International Centre, Banaras Hindu University

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Dr. Shourya Roy
Senior Research Director, Flipkart

Rajiv Singh
Founder CEO – Quant Samurai (A Global Cybersecurity Entity)
Advisory Board of The Center For Innovation Commercialization, USA
Advisory Board of School of CyberPeace, India

Entrepreneur Experience:
Founder CEO of IndiCash (A TATA Group Venture), India
Founder CEO of ACCPAC (A Computer Associates Venture), USA

Leadership Experience:
Global Head – Cyber security - Tech Mahindra
Managing Director - Entrust Datacard, USA
President – TATA Communications Banking Infra Solutions Ltd.
Managing Director - Diebold, USA
Managing Director - Computer Associates (CA), USA

- Trusted Security Advisor to Governments, Law Enforcement, Military, and Enterprises across Global Markets. Experience with Military grade Cybersecurity Technologies & Services.
- Expertise in Innovative US Dept of Defense approved Cyber technologies, Silicon Valley & Israel Start-ups.
- NextGen Advanced Cyber Defence, Cyber Upskilling, National Security, and Zero-Trust
- Security Strategy.

Dr. Shourya Roy is a seasoned technology leader with specialization in Artificial Intelligence and Machine Learning. Over the past two decades, he has led data science, data product, and data analytics teams with IBM, Xerox, American Express, and Flipkart. His past work includes a range of foundational and applied research, strategic innovation, product management, and building local and global teams. A thought leader and author of about a hundred peer-reviewed papers in premier journals and conferences and over 30 granted patents.

Stand out with this IITP MTech Degree Certificate

A student is declared eligible for the award of an Executive M.Tech. degree if:

He/she has completed all of the credit requirements for the degree with a grade of DD or higher in each of the subjects (Theoretical, Laboratory, Workshop, Sessional, etc), Seminar, Project, and so on.

Obtained a CPI of 6.0 or higher at the end of the semester in which he/she has completed all degree requirements

Note:
-All certificate images are for illustrative purposes only and may be subject to change at the discretion of IIT Patna.

IIT Patna Alumni Benefits

Access to Lifelong IIT Patna Email ID.
Permanent access to the e-library of the institute.
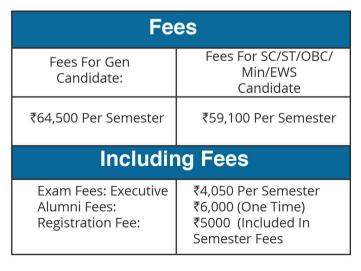Concession in IIT Patna Guest House accommodation

charges.
Easy access to the campus and sports and gym facilities at IIT Patna..

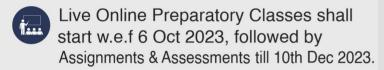Network with global alumni community and opportunity to promote startup ideas as well as their owned business.

Organise events on campus such as Homecoming events, Alumni awards ceremonies, and Reunions. Invitation to Alumni Specific events during College Fests.
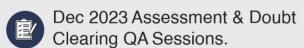
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FINANCEPEER
Zero Cost Zero Interest

Executive M Tech in
Artificial Intelligence & Data Science Engineering

Electives
Big Data / Block Chain

IIT Patna
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Affordable Fee
Structure With Installment Facility

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Fees	
Fees For Gen Candidate:	Fees For SC/ST/OBC/ Min/EWS Candidate
₹64,500 Per Semester	₹59,100 Per Semester
Including Fees	
Exam Fees: Executive Alumni Fees: Registration Fee:	₹4,050 Per Semester ₹6,000 (One Time) ₹5000 (Included In Semester Fees

Live Online Preparatory Classes shall start w.e.f 6 Oct 2023, followed by Assignments & Assessments till 10th Dec 2023.

Dec 2023 Assessment & Doubt Clearing QA Sessions.

w.e.f Jan 2024 onwards Regular Classes of 1st Semester.

1st Term Exam.

Regular Classes of 2nd Term.

2nd Term Exam.

3rd Semester Classes - Dissertation work starting Jan 2025 onwards.

Presentation on Thesis or Dissertation.

Final Term Research Paper Publication with Programme Coordinator.

Final Assessment.

Award of Degree Certificate during Convocation (2026).

Indian Institute of Technology Patna
भारतीय प्रौद्योगिकी संस्थान पटना

Kanpa Road, Bihta, Patna – 801106, India, Phone: 06115-233102

Executive M.Tech in AI & DSE
Preparatory Class Schedule (Tentative)

October 06, 2023

Introduction to Computer Science and Engineering

October 07, 2023

Introduction to Artificial Intelligence and Data Science Engineering

October 13, 2023

Fundamentals of Data Structures

October 14, 2023

Assignments on Data Structures using C

October 20, 2023

Preliminary of Algorithms

October 21, 2023

Assignments on Algorithm

October 27, 2023

Search on AI and Data Science-I

October 28, 2023

Tutorial on Python

November 04, 2023

Search in AI and Data Science-II

November 05, 2023

Database Preliminary

November 11, 2023

Assignments on Database

November 12, 2023

Fundamentals of Machine Learning -I

November 18, 2023

Fundamentals of Machine Learning -II

November 19, 2023

Assignment on Machine Learning

November 25, 2023

Neural Network Preliminaries

November 26, 2023

Assignments on Neural Networks

December 01, 2023

Interaction

Online Assessment: December 10, 2023

CALL TO FIND OUT MORE
9021156156

HOW IT FITS WITH YOUR CAREER?

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executive.cep@iitp.ac.in

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Degree Certificate

अभिषद की अनुशंसा पर
भारतीय प्रौद्योगिकी संस्थान पटना
के अभिशासक परिषद द्वारा

xxxx

प्रौद्योगिकी परास्नातक की उपाधि आर्टिफीसियल इंटेलिजेंस
में छब्बीस अगस्त दो हज़ार चौबीस को पटना में प्रदान की गयी

The Board of Governors
of the
Indian Institute of Technology Patna
upon the recommendation of the Senate hereby confers the degree of
Executive Master of Technology in Artificial Intelligence
on
xxxx

given at Patna on this Twenty Sixth day of August, Two Thousand Twenty Four

Registrar   Director   Chairman, Board of Governor

Date: 26 Aug 2024

SAMPLE

Indian Institute of Technology, Patna

Indian Institute of Technology Patna, Bihta, Patna -801106 (Bihar)

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