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Futureense.uni

PG Diploma and **MTech.* in Data Engineering** With Data Science, Analytics and Generative AI

Indian Institute of Technology, Jodhpur



**12 MONTHS
PROGRAM**

**IIT ALUMNI
STATUS**

LIVE ONLINE SESSIONS

by IIT Jodhpur faculty and ex-MAANG
Experts with Campus immersion

AY 2024 - 25 | Cohort 4

Apply Now



*Conditions Apply (Admission to MTech. is subject to IIT Jodhpur approval)

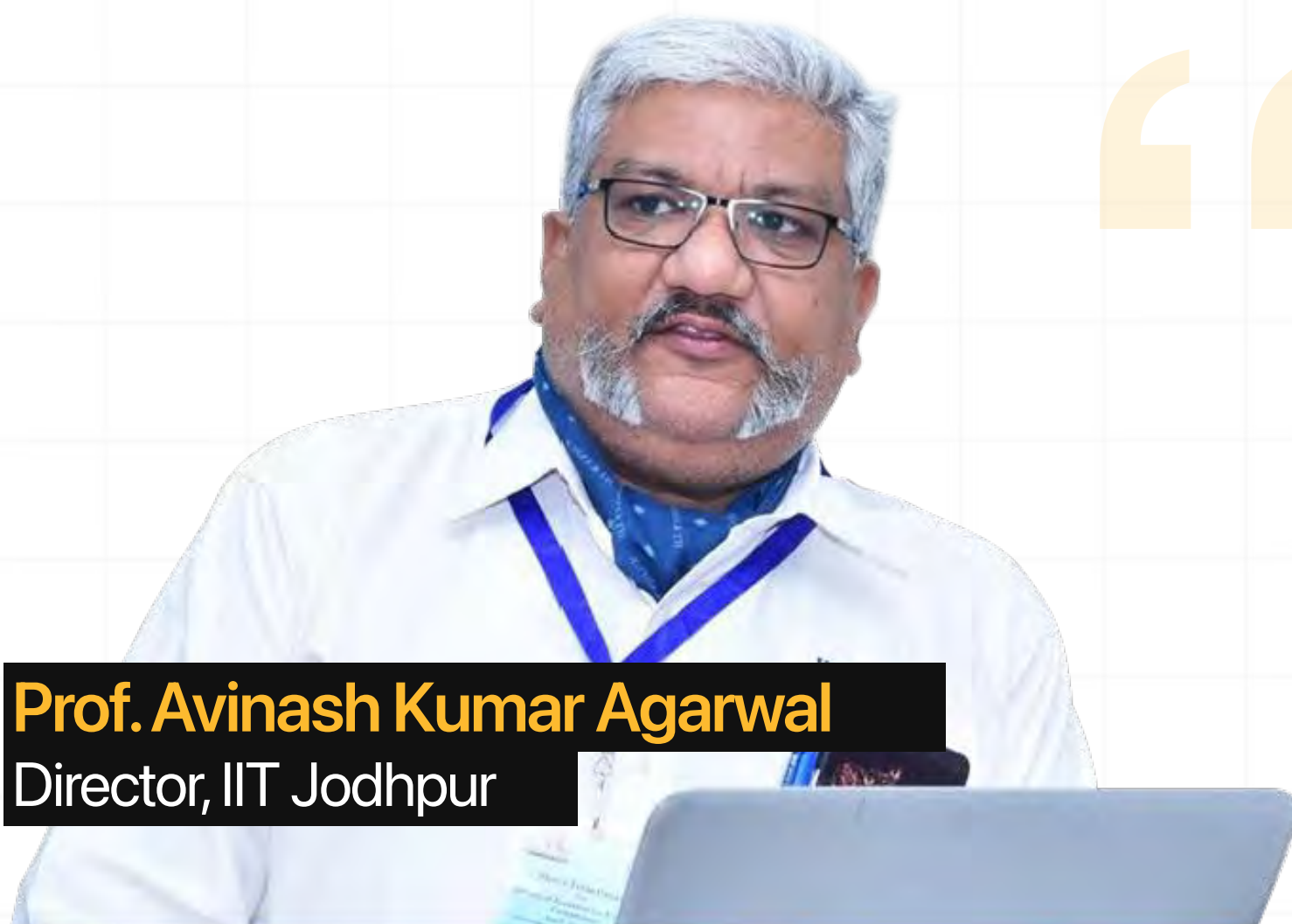
The information provided in the brochure is official and final and supersedes all other information either exchanged or perceived.



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Message from — The Director



Prof. Avinash Kumar Agarwal
Director, IIT Jodhpur



*"Our vision is to equip learners pursuing **PGD & MTech. in Data Engineering** program with the necessary modern skills and competencies to participate in a rapidly transforming technological knowledge ecosystem, shaped by data engineering and artificial intelligence. This will ensure a workforce ready for the new and emerging job roles putting India at the forefront of the rapid global technological advancements."*

Prof. Avinash Kumar Agarwal is currently the Director at IIT Jodhpur. Prior to joining IIT Jodhpur, he served as an SBI Endowed Chair Professor and J C Bose National Fellow at the Department of Mechanical Engineering, IIT Kanpur. His research interests include IC engines, combustion, alternative fuels, optical diagnostics, particulate and emission control etc.

Prof. Agarwal has published over 540+ peer-reviewed international journal and conference papers, 70+ edited books, 125+ book chapters attracting more than 17500+ Scopus and more than 26000+ Google scholar citations. He is the associate principal editor of prestigious "Fuel" Journal. For his outstanding contributions, Prof. Agarwal has been conferred upon several prominent recognitions and awards such as J C Bose National Fellowship (2019) by SERB, the Clarivate Analytics India Citation Award (2017) in Engineering and Technology and prestigious Shanti Swarup Bhatnagar Prize (2016) in Engineering Sciences.

He is an elected Fellow of the Society of Automotive Engineers International (USA), American Society of Mechanical Engineers, Indian National Academy of Engineering, Royal Society of Chemistry, National Academy of Science Allahabad, American Association for Advancement in Science (USA), Combustion Institute (USA), and The World Academy of Sciences.



Context of the Program

DATA ENGINEERING

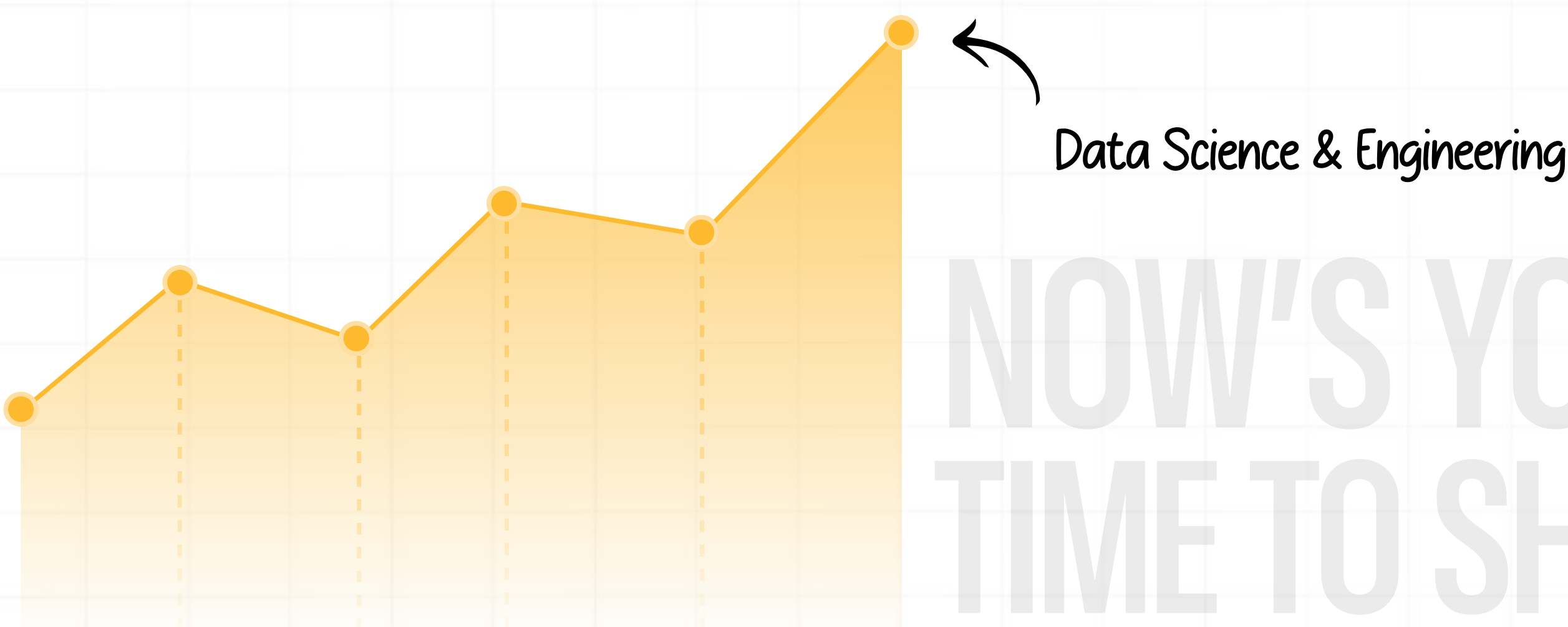
DATA-DRIVEN DECISION-MAKING

Businesses and organizations are relying more and more

Demand for skilled data professionals has skyrocketed

However, just data science expertise is not enough. Modern organizations want to be more **Data-driven** than ever before. In order to squeeze every ounce of value out of their data, the trend has been moved from just experimentation or MVP test cases to actually deploying and commercializing the data solutions at scale. In addition, the emergence of **Generative AI** and other automated solutions need new skills and capabilities in data professionals.

Data Science and Engineering job opportunities in India are vast, and there are many opportunities for those with the right skill set. With the right training, data scientists and engineers can help businesses to improve their **Decision-making**, gain insights into their customers, build scalable data solutions and automate their operations.



NOW'S YOUR TIME TO SHINE



- A **NASSCOM** analysis projects that the Indian data analytics market will increase to **\$16 Billion** in 2025.
- The demand for Data Scientists is at an all-time high in India with a prediction of around **11 Million Job Openings** by 2026. (Times of India, 2022)
- Data science professionals with **3-10 years of Experience** to get annual salaries in the range of **₹25 Lakh** to **₹65 Lakh**, which can go up to **₹1 Crore**. (Talent Trends Report 2021 by Michael Page India, 2021)



About PG Diploma in Data Engineering

With Data Science, Analytics and Generative AI

The first of its kind **Highly Industry Oriented PG Diploma Program** is designed by the top faculty at IIT Jodhpur along with inputs from various global schools of Data Science and Engineering and industry experts including top **CXOs and Leaders of Data Science and Engineering Practice**.

This program takes into account the rapidly evolving landscape of **Data Science, Engineering and AI Driven Technology Stacks**, the transformation led by Generative AI, as well as the future of data-focused job-role competencies. IIT Jodhpur is well known for its excellence in academics, research, and creative accomplishments as well as its multidisciplinary approach as well as industry relevance, and the same expertise is brought into this program design.

This **12-month Intensive Program** weaves together academic and conceptual learnings from top faculty from IIT Jodhpur, augmented by hands-on practical sessions conducted on the most recent tools and platforms led by Industry Experts, including Prompt Engineering and Generative AI, integrates industry use cases, mini-projects, assignments, and capstone projects to provide a highly experiential learning outcome. The program will provide you with the opportunity to work on real-world projects, enabling them to apply their learning in practical scenarios.



DATA

The diagram features a central circular hub with the word 'DATA' in bold, black capital letters. Surrounding this hub are several concentric rings and a network of nodes connected by lines, representing data flow and processing. The nodes are colored in shades of blue, green, and red. The background is a light gray grid. Various icons are scattered around the central hub, including a computer monitor, a bar chart, a line graph, a cloud, a gear, and a network of nodes. The overall theme is data engineering and analytics.

Who is the — Program for

If you aspire for a high growth career in data field, either in the **Data Science, ML Track** or in the **Engineering and MLOps Track**, this program will provide you with the right knowledge, tools, technologies and a prestigious IIT PG Diploma credential to accelerate your career.

If you are an aspiring or a current **Software and Technology Professional**, this PG Diploma program will help you hone **High In-demand Skills** such as **Big Data Engineering, MLOps, and Machine Learning**.

Eligibility* For students who want to ONLY pursue PGD in Data Engineering

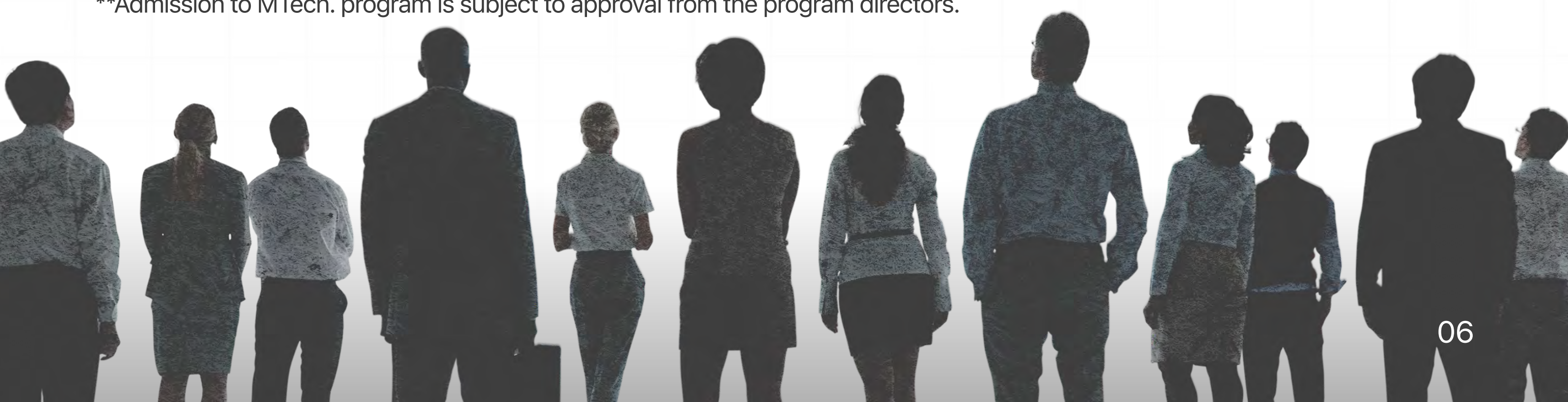
- Minimum **50%** marks in **Undergraduation**, or **Postgraduation**:
 - BTech. Degree
 - BSc./ BCA+ MSc./MCA/Master's degree in science/or in a related field
- Minimum of **1 Years of Work Experience** is mandatory (after qualifying degree) at the time of registration to the program.
(The applicant must qualify the pre-screen test to be eligible for the program)

Eligibility** For students who want to upgrade to MTech. after PGD in Data Engineering

- Minimum **60%** marks in **Undergraduation**
 - BTech. Degree
 - BSc./ BCA+ MSc./Master's degree in science
 - BSc./ BCA + MCA, or in a related field
- First division in **Under-graduation / Post-graduation**
- Minimum of **2 Years of Work Experience** is mandatory (after qualifying degree) at the time of registration to the program.
(The applicant must qualify the pre-screen test to be eligible for the program)

*Students going only for PGD will not be allowed admission to MTech.

**Admission to MTech. program is subject to approval from the program directors.





Program — Highlights

NEXT-GEN CURRICULUM FOR A FUTURE-PROOF CAREER

- Cutting-edge Project-centric Curriculum built by Industry Experts and IIT Jodhpur Faculty after the emergence of Generative AI
- Application-oriented approach along with Case Studies & Project work
- Transfer your credits towards Executive MTech. Program by IIT Jodhpur*

THE IIT DREAM

- Attain PGD by IIT Jodhpur
- Achieve IIT Jodhpur Alumni Status
- Become a part of IIT Jodhpur Alumni network
- Network with experts from Data & Analytics industry

HYBRID LEARNING

- Live Sessions Every Week
- Live Online Masterclasses by Top Industry Experts
- There will be two 7-9 Days Campus Immersions every Academic Year

INDUSTRY-TETHER WITH FUTURENSE

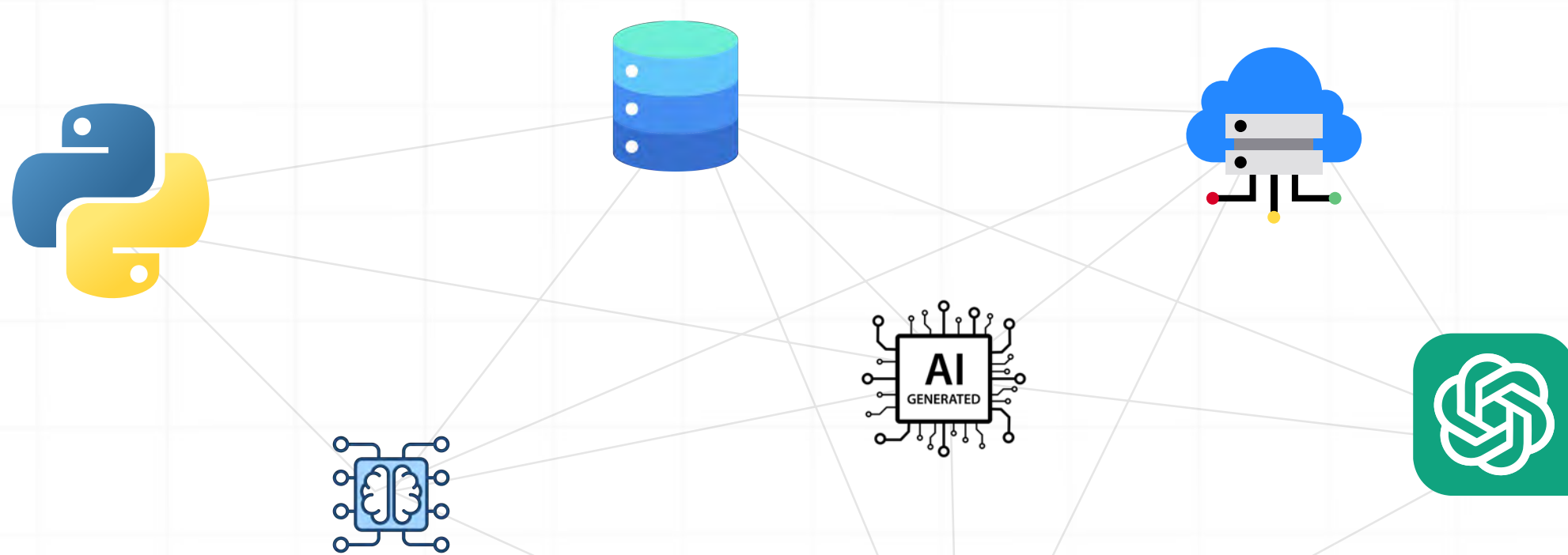
- Fully Sponsored FutureNSE Bridge Course covering the Foundations of the Program
- FutureNSE Job Assistance

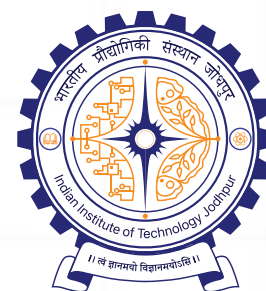
*Based on performance and PDs discretion



Program — Outcomes

- Be able to use **Python** as well as the latest tools such as **ChatGPT** and **Generative AI** for building data engineering solutions
- Design and work with **Modern Databases, Data Models** and **ETL Work Flows**, write applications to manipulate data thereof
- Work with the latest **Big Data Technologies, Ecosystems**, and **Architect end to end Data Systems and Infrastructures**
- **Design and Implement** appropriate **Storage and Processing Techniques** for every type of big data across domains
- **Deploy Data Mining Techniques** to discover insights from big data, design and deploy scalable dashboards and insights infrastructures
- Create Cloud Data-based Warehouses, build Data Lakes and use Cloud Infrastructure for data wrangling and transformation, leverage cloud AI and ML services and design a deployment strategy for a Big Data application and implement it successfully
- Use **Supervised and Unsupervised Learning Techniques** to derive insights from Big Data
- Work on cloud environment to deploy models and utilize Cloud-based Infrastructure





Student Journey



Submit your Application



Appear for the Pre-screening Test



Pay the Application Processing Fee



Receive your Offer Letter from IIT Jodhpur and Complete your Full Payment



Strengthen your Foundations through Futureense Bridge Course



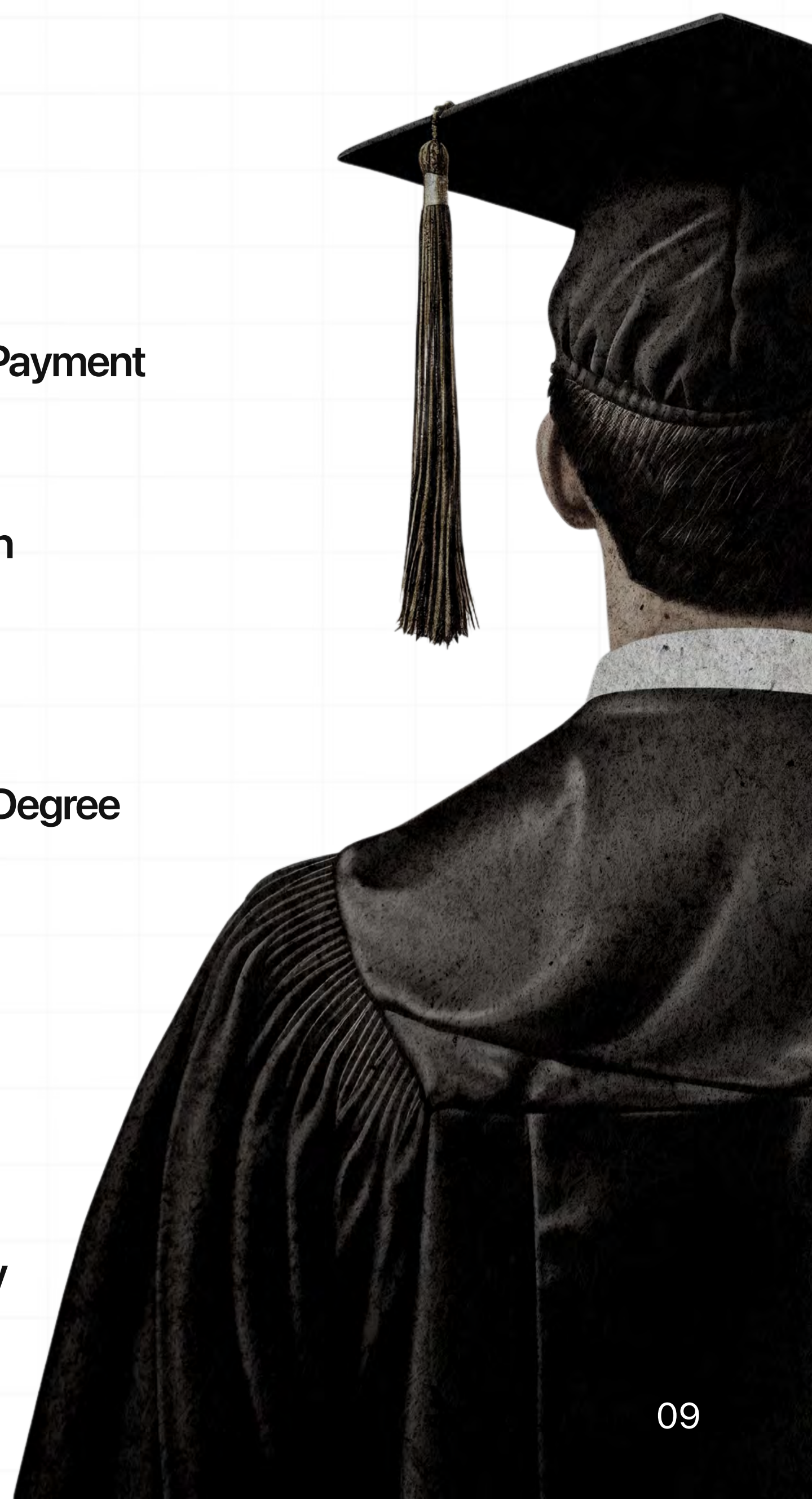
Begin your IIT Jodhpur PG Diploma Degree

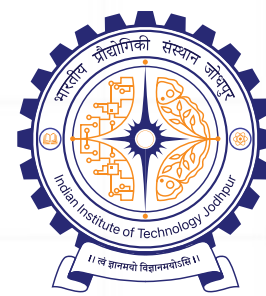


Become an IIT Jodhpur PG Diploma Graduate



Transfer your credits towards IIT Jodhpur MTech. Program without any test or screening!*





Post IIT Jodhpur PG Diploma

Complete MTech. Degree in Executive Mode in 1 year!

Enhance your professional growth by leveraging your academic credits from the **PG Diploma Program** and transfer to IIT Jodhpur's **MTech. Program in Executive Mode** to unlock new career opportunities.*

Eligibility Criteria: Based on PGD performance and discretion of the Program Director.

Program Fee: ₹2,55,000**

For More Information: office_eep@iitj.ac.in

Students have preferred opting for Executive MTech. Degree after PG Diploma in Data Engineering to enhance their career growth in several ways

Deepens expertise for tackling complex data engineering challenges with confidence.

Enhances job market competitiveness, favoring candidates with advanced degrees.

*T&C applies

**For PGD candidates who want to upgrade to MTech.





Career — Opportunities

Potential Job Roles

Data Science
Manager

AVERAGE SALARY

₹28L +

Data Architect

AVERAGE SALARY

₹30L +

Business Analyst
Manager

AVERAGE SALARY

₹18L +

Data Scientist

AVERAGE SALARY

₹20L - 50L

Big Data
Developer

AVERAGE SALARY

₹7L - 20L

Data Visualization
Specialist

AVERAGE SALARY

₹7L - 20L

Data Mining

AVERAGE SALARY

₹12L - 25L

Machine Learning
Engineer

AVERAGE SALARY

₹15L - 50L

Business
Intelligence Analyst

AVERAGE SALARY

₹10L - 20L

Research
Scientist

AVERAGE SALARY

₹10L - 20L

*Salary Source: Glassdoor

*Futureense does not offer any employment



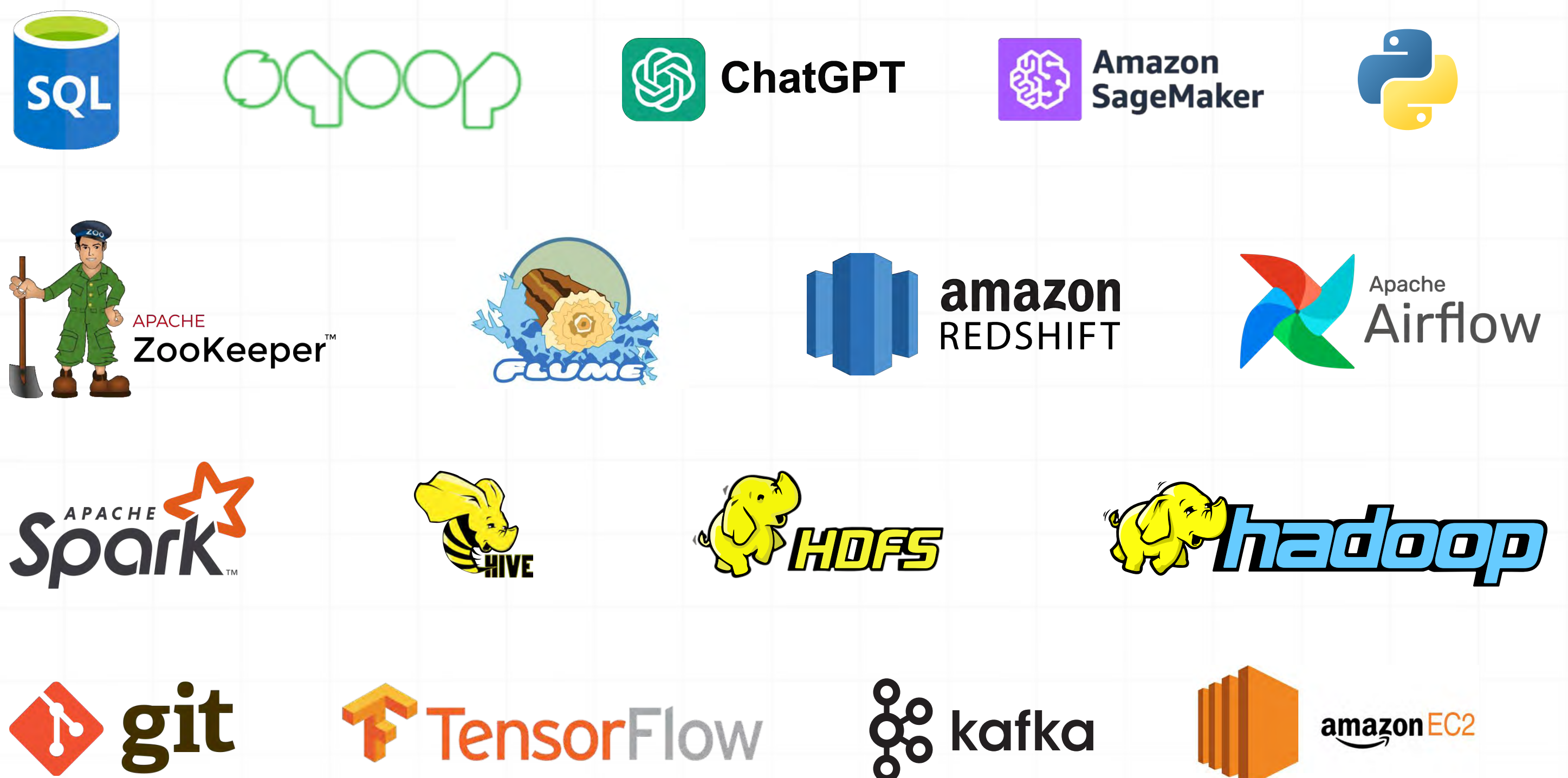


Potential Recruiters

World's leading companies are hiring for the most in-demand data job roles!



Tools Covered



*Futureense does not offer any employment

Futureense Bridge Course

Prepare for your **IIT Jodhpur PG Diploma in Data Engineering** with the **Futureense Bridge Course**.

This foundational program, offered at **No Extra Cost**, equips you for success. It includes **Live Online Training** with **Industry Experts**. These interactive sessions provide valuable insights and knowledge. Beyond the live training, access **30+ Hours of Self-guided Learning Materials** to master core concepts. The course concludes with an assessment to validate your knowledge. With the Futureense Bridge Course, get ready to excel in your academic journey.

As students of Futureense executive education programs, you get exclusive access to our proprietary bridge courses. These have been carefully curated in partnership with IIT, industry veterans and our **Futureense Leadership Council**.

These courses offer a unique guided self-learning roadmap to get up to speed with the prerequisites of the courses and program you will be embarking upon.

Weekly 1 hours of live online training and 30+ hours of self guided learning

01 — PYTHON PROGRAMMING BASICS

04 — AGILE AND SCRUM FOR
PROJECT MANAGEMENT

02 — MYSQL DATABASE ESSENTIALS

05 — GIT FOR SOURCE CODE MANAGEMENT

03 — MATHEMATICAL FOUNDATIONS

06 — PROMPT ENGINEERING WITH CHATGPT



Curriculum

TRIMESTER 1

01

Data Analytics

- Applied Mathematics and Statistics
- Python Programming for Data Engineering
- Database and SQL Programming

Electives

- Fundamentals of Business and Data Analytics
- Fundamentals of Data Science
- Data Visualization and Dashboards
- Decision Science for Operations Management
- Data Mining and Warehousing

TRIMESTER 2

02

Data Science

- Web & Social Network Analysis
- Machine Learning
- Distributed Systems and Platforms

Electives

- Cloud Computing
- Optimization for Data Science
- Digital Marketing Analytics
- People Analytics
- Retail Analytics

TRIMESTER 3

03

Data Engineering

- Big Data: Storage, Processing and Management
- Advanced Data Engineering with Cloud

Electives

- Stream Processing and Analytics
- Deploying Data Solutions - MLOps
- Financial Analytics

CAPSTONE PROJECT

04



Note: The electives list above is indicative. IIT Jodhpur is an institution of eminence in areas of emerging technologies and launches new courses dynamically every trimester. Therefore, the compulsory electives are updated on a regular basis and will be made available as per discretion of the faculty and Program Directors.

IIT Jodhpur —

Campus Immersions

Campus immersion will be an essential element of the program experience, in which learners must attend the **Campus Activities** and **Sessions on Campus** (IIT Jodhpur campus). There will be **two 7-9 day Campus Immersions** every Academic Year. Learners will get a **Live Classroom Experience**, with the opportunity to meet and learn in person from the **Esteemed Faculty** at IIT Jodhpur and engage in peer learning or presentations and project work.

The immersion timetable will be set by IIT Jodhpur, and will be communicated to students in advance post onset of the program.



Program — Directors



Prof. Dip Sankar Banerjee

Associate Professor
IIT Jodhpur

Dr. Dip Sankar Banerjee is an Associate Professor at IIT Jodhpur since December 2020. He completed his PhD. in Computer Science and Engineering from the Indian Institute of Information Technology Hyderabad in 2014. He was a postdoc at the Ohio State University from 2015-2016. His research interests are broadly in the area of High Performance Computing, Computing Systems, Computer Architecture, and Data Analytics.



Prof. Subhash Bhagat

Assistant Professor Department of Mathematics
IIT Jodhpur

Dr. Subhash is an Assistant Professor in the Department of Mathematics at IIT Jodhpur in Rajasthan, India. Prior to this position, he held postdoctoral fellowships at the University of Quebec in Outaouais and the University of Ottawa in Canada. He received his PhD. from the Advanced Computing and Microelectronics Unit at the Indian Statistical Institute in Kolkata under the supervision of Prof. Krishnendu Mukhopadhyaya. His research interests are in the areas of distributed systems and algorithms, specifically focused on distributed algorithms for Swarm Robots and Autonomous Multi-Agent systems, Internet of Robotic Things (IoRT), autonomous mobile robotic sensors, and security in distributed computing.



Esteemed Advisors



Jagdip Singh

PhD Co-Director
Master of Business Analytics and Intelligence



Jagdip Singh, PhD., is a globally recognized expert in organizational frontline effectiveness. He has been honored with prestigious awards, including the Weatherhead School of Management's Research Recognition Award and the University's Faculty Distinguished Research award. With a focus on customer connections, Jagdip has made enduring contributions to the field. He co-founded the interdisciplinary "Organizational Frontlines Research" initiative and has received accolades for his reviewing efforts from esteemed journals.



Kamlesh Mathur

PhD Co-Director,
Master of Business Analytics and Intelligence

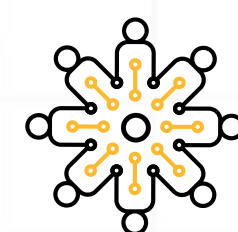


Kamlesh Mathur, PhD., is an expert in supply chain logistics, focusing on the distribution aspects of the supply chain and its impact on business operations. His research addresses efficient routing and scheduling of delivery vehicles, leading to significant cost savings. He also studies the optimal location of claim and service centers for enhanced efficiency and effectiveness. Dr. Mathur's work has been published in esteemed journals such as Transportation Science, Computers and Operations Research, and European Journal of Operations Research. As a faculty member at the Weatherhead School of Management, he teaches courses on Business Statistics, Quantitative Analysis, Computer Simulation, and Supply Chain Logistics.





Futureense Leadership Council



futureense
leadership
council



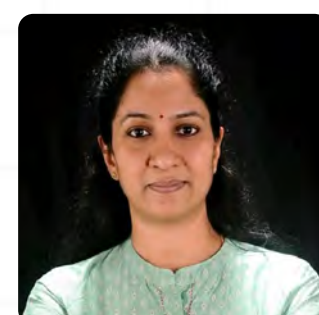
Divesh Singla

SVP of Global Operations & DART, Head APAC & Managing Director India & Philippines



Kaushik Das

Transformation | Strategy | Operations | Analytics



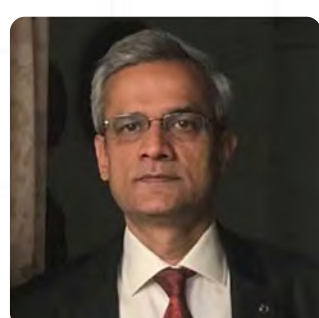
Nithya Subramanian

Head of Data & Analytics - AMEA



Anupam Gupta

VP Enterprise Data and Analytics



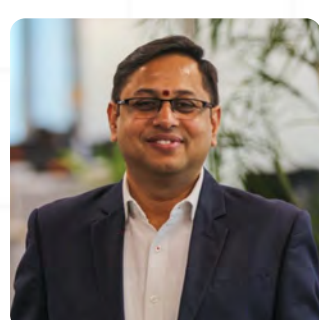
Pankaj Rai

Group Chief Data and Analytics Officer



Ishu Jain

Head of Analytics



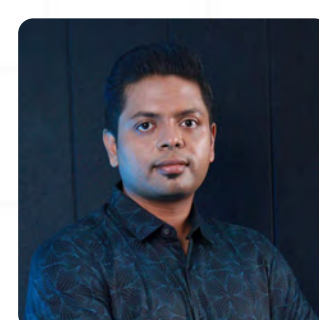
Nitin Srivastava

Data & Analytics India Lead



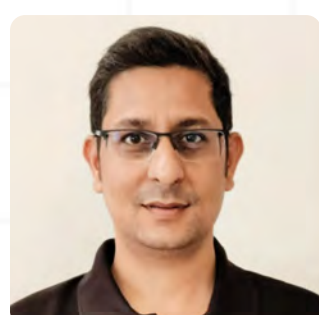
Shrisha Ray

Director of Engineering



A V Rahul

Director, Analytics



Ankit Mogra

Director - BI & Analytics



Saurabh Agarwal

Chief Executive Officer



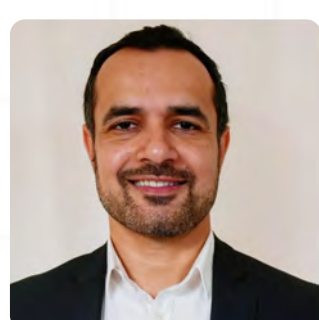
Madhu Hosadurga

Global Vice President, Enterprise AI



Anand Das

Chief Digital & AI Officer



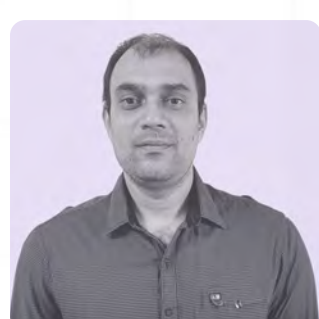
Ashish Dabas

Vice President



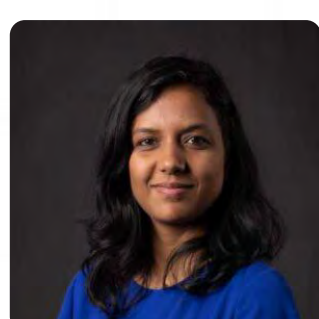
Bhargab Dutta

Chief Digital Officer



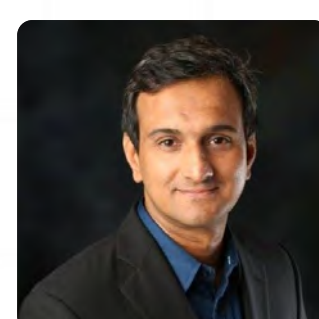
Alok Tiwari

Vice President - Data



Muthumari S

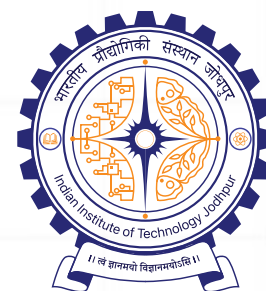
Global Head of Data & AI Studio



Aditya Khandekar

President





Pankaj Srivastava

SVP - Head of Credit
Analysis Unit Offshore



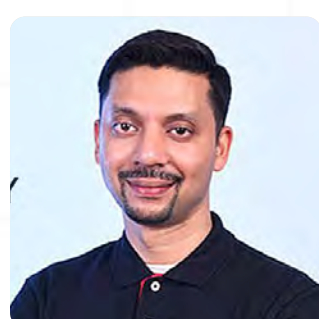
Supria Dhanda

Co-Founder &
Managing Partner



Saurabh Kumar

Director - Data
Engineering



Satyakam Mohanty

Founder &
Managing Partner



Sharmistha Chatterjee

Head of Software and
Systems Engineering



Arvind Balasundram

Executive Director,
Commercial Insights & Analytics



Praveen Sathyadev

Head Business Growth (VP)
Analytics, Insights and AI



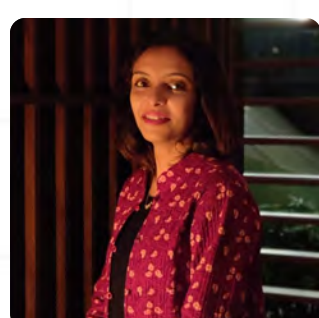
Akshay Kumar

Research &
Analytics Leader



Anirban Nandi

Head of AI Products &
Analytics (Vice President)



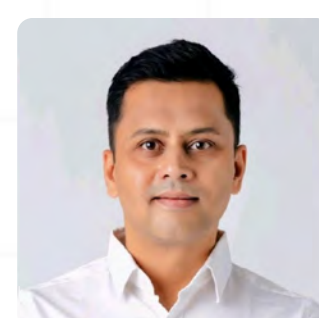
Indrani Goswami

Director of Analytics



Srini Oduru

Head of IT Delivery
and Operations



Tushar Sahu

Director Engineering



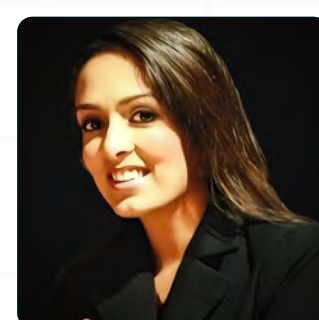
Sumon Mal

Director
Engineering



Vishal Nagpal

Data Science and
Analytics Leader



Aarti Krishan

Director
Head of Information Security



Monica S Pirgal

Managing Director &
Site head - Board member



Deepa Mahesh

Head of Strategy &
Operations, Board Member



Jayati De

Analytics Leader



Krithika Muthukrishnan

Chief Data Science Officer



Program Details

DURATION

12 Months | 330 Hours

PROGRAMME COMMENCEMENT

January 10th, 2025 (Tentative)

PROGRAMME FEE

Course Fee: ₹3,10,000

Includes Application Processing Fees of ₹10,000

(The Application Processing Fee is included in and adjusted with the course fees, which must be paid at the time of completing the application. If the application is not accepted by IIT Jodhpur or FutureNSE, this amount will be fully refunded. However, if the student withdraws or drops out for any reason after the application is accepted, this amount is strictly non-refundable).

Administrative Fee: ₹15,000

(Immersion Fee includes lodging, but meals are excluded).

*No refunds post the last date of registration. Fees are subject to change based on the institute's current policy.

TOTAL CREDITS

35

LEARNING MODE

Live Online Sessions

There will be two 7-9 days Campus Immersions every Academic Year

PROGRAM SCHEDULE

Friday, Saturday and Sunday

The class schedule will be determined by IIT Jodhpur and is scheduled to take place on Fridays (late evenings), Saturdays, and Sundays, subject to the availability of the faculty.

Admission — Process

01 —  — APPLICATION

02 —  — **PRE-SCREEN TEST**
(APTITUDE, CONCEPTUAL, CODING AND COMMUNICATION)

03 —  — APPLICATION PROCESSING FEE

04 —  — **RECEIVE OFFER LETTER
FROM IIT JODHPUR**

05 —  — **SUCCESSFUL ENROLLMENT
AFTER FEE PAYMENT**



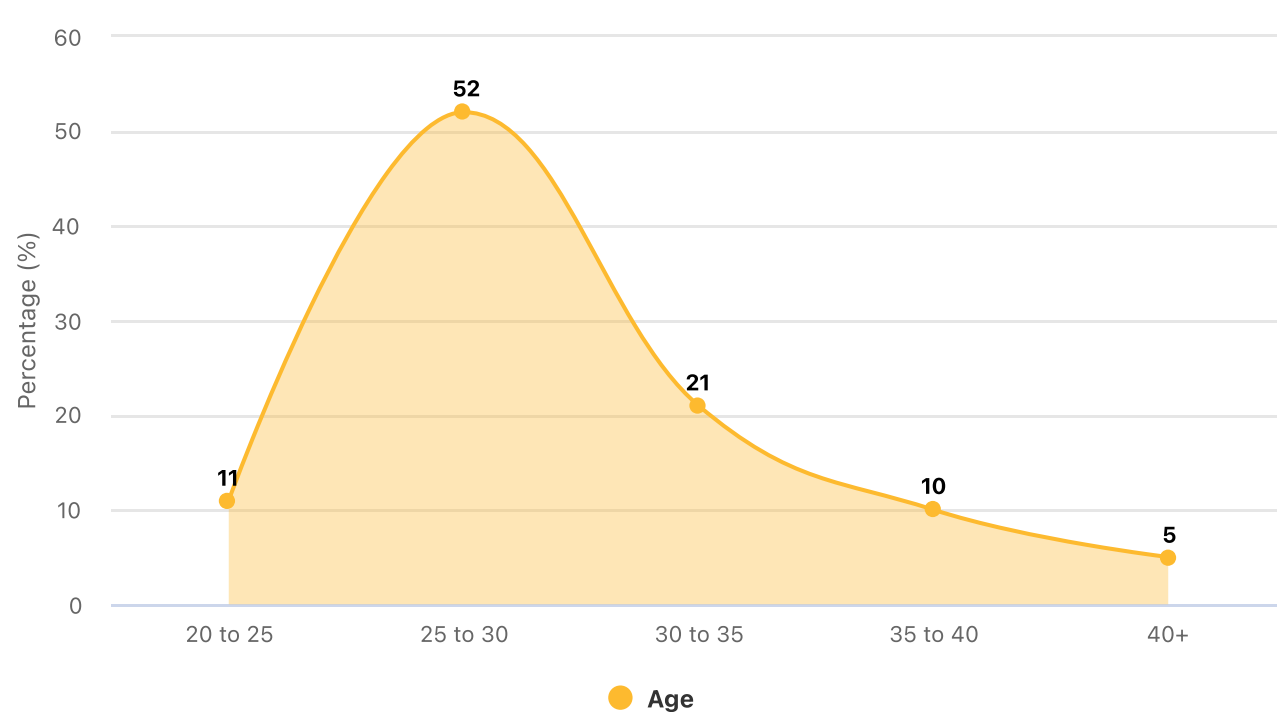


Cohort — Demographics & Profile

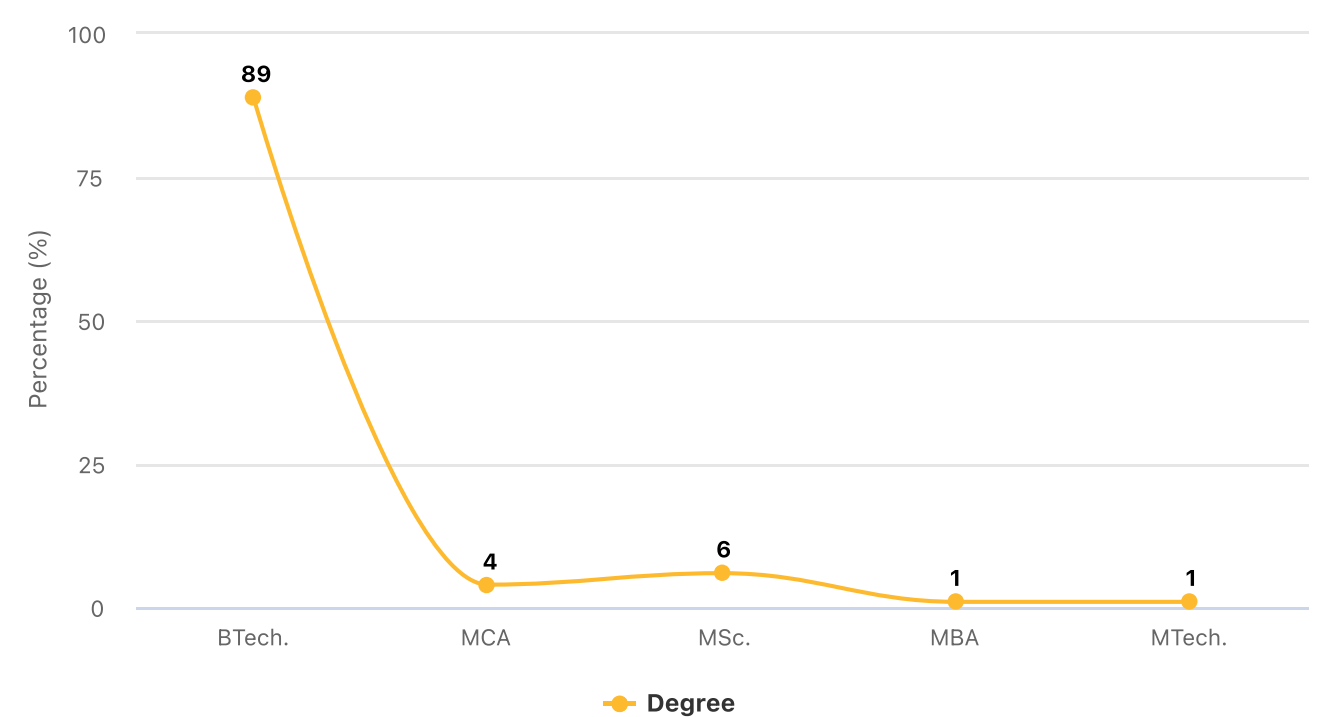
Cohort Overview

- Average Years of Experience: **4.5 Years**
- Average Age: **29.3 Years**
- Average CTC: **₹13 Lakh**

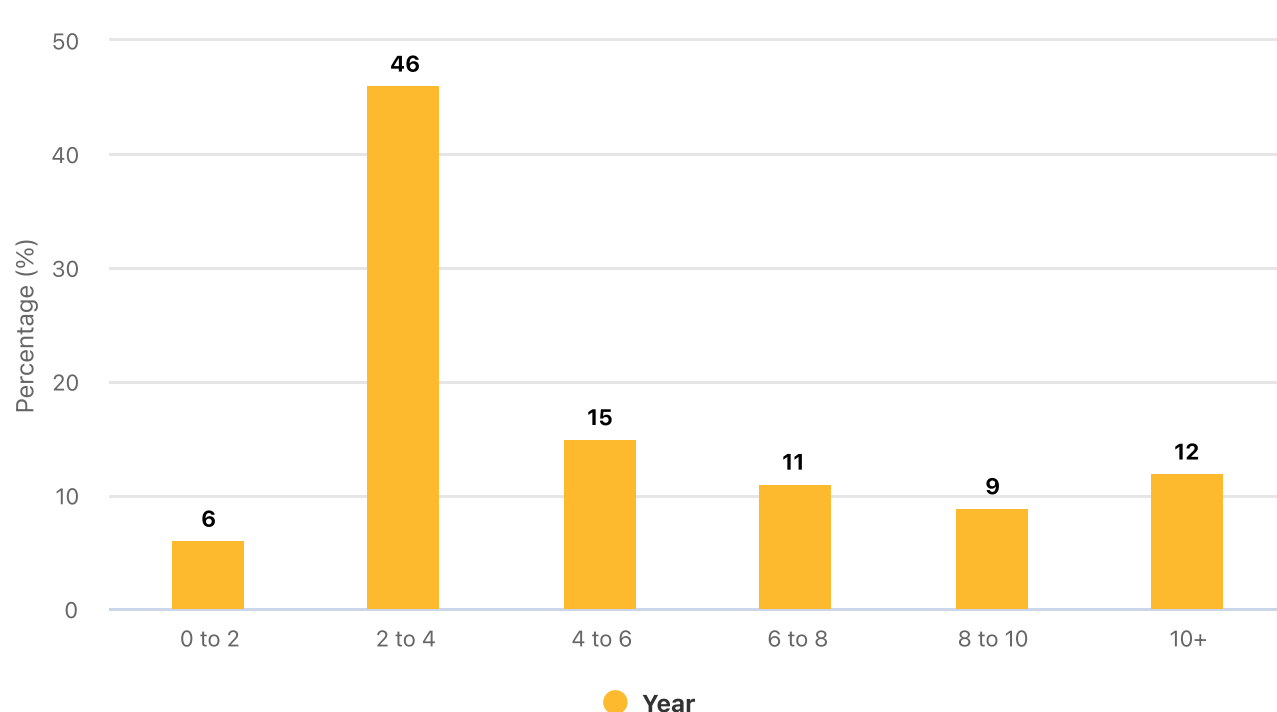
Age Distribution



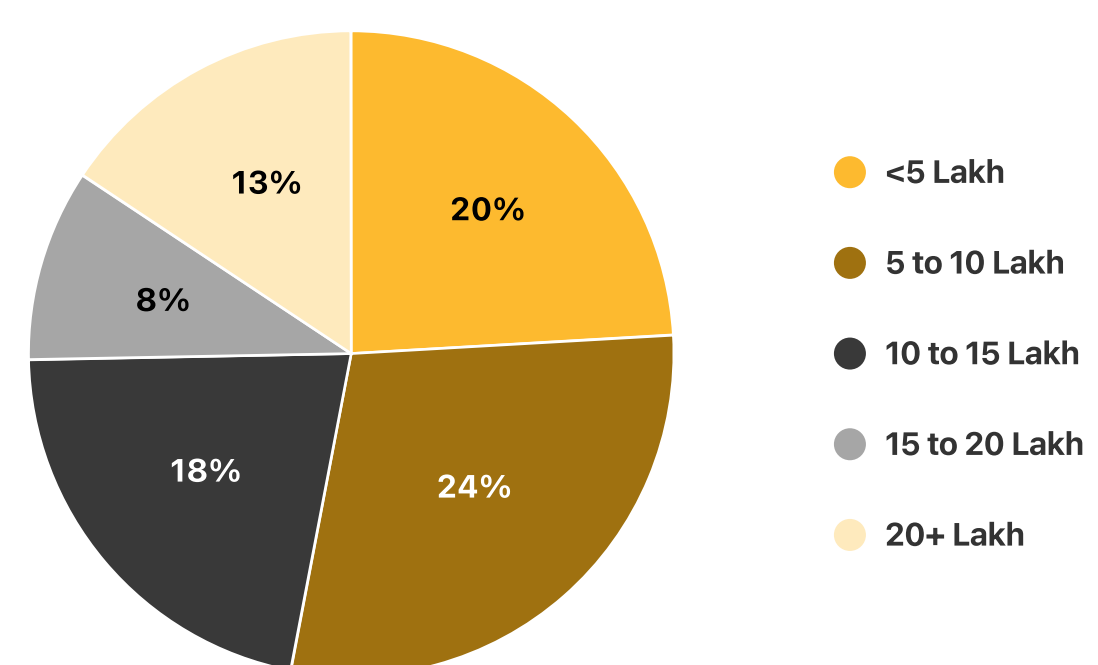
Educational Background: Highest Degree Attained



Years of Professional Experience



CTC Distribution



Previous Companies



and more

*Futureense does not offer any employment

Strategic Career Support for — Your Career Success

Unlock unparalleled opportunities and elevate your career with Futureense's tailored career assistance program.



Professional Certification in Generative AI and LLM Applications AI

Gain cutting-edge skills with our comprehensive GenAI course, an equal blend of technology and practical application, and earn a prestigious certificate upon completion, worth ₹1.49 Lakhs.



Mock Interviews and Mentor Connects

Mirror real-world job scenarios with our mock interviews, and gain personalized guidance from industry mentors to navigate your career path with confidence.



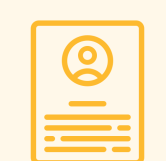
Tech Titan Webinars

Connect with Industry experts, participate in interactive sessions, and ask your questions directly. Learn from the best through Tech Titan Webinars, featuring invaluable insights and knowledge from leading industry leaders who are shaping the future of technology.



LinkedIn Optimization

Stand out in the professional world with Futureense's expert LinkedIn optimization strategies that highlight your unique skills and experiences.



Resume Support

Receive personalized resume support to craft a standout CV that effectively showcases your strengths and achievements, ensuring you capture the attention of recruiters.



Exclusive Interview Playbook

Access our exclusive interview playbooks filled with insider tips, common interview questions, and sample answers to help you ace your job applications and make a lasting impression on employers.



CAREER SUCCESS

About IIT Jodhpur



The Indian Institute of Technology Jodhpur was founded in 2008 with a focus on technology education and research to promote the economic development of India. Its permanent campus is spread over 852 acres and has state-of-the-art facilities for research and academic activities. The institute is committed to a multidisciplinary approach to technology development and has organized its degree programs through departments and research activities through centers for technologies.

In addition to its focus on traditional education, IIT Jodhpur has been actively pursuing programs in executive mode for working professionals. The institute has been leveraging its academic expertise, industry collaborations, and infrastructure to create a range of high-quality programs that cater to the needs of today's professionals. Its faculty members, with extensive industry experience and academic expertise, bring a unique blend of theoretical knowledge and practical experience to the classroom.

To establish itself as a leader industry aligned programs for professionals, IIT Jodhpur has been developing programs that are relevant and contemporary to the evolving needs of the industry. It has also established strong industry linkages to develop customized programs that cater to the specific needs of their employees. The institute has invested in state-of-the-art infrastructure, modern classrooms, well-equipped labs, a vast collection of books and research papers in the library, and online learning platforms and tools to provide an immersive learning experience to the participants.

About —

Futureense Technologies



At Futureense, we build next-gen technology talent that hold the key to a smarter and tech savvy future.

Futureense - The Godfather of Talent, is a new-age tech talent organization that provides an ideal platform for tech talent to unlock its true potential through its career-accelerating ecosystem and enables Fortune 500 companies to access an untapped talent pool.

With a mission to democratize the playing field for the tech talent of the country, Futureense, under its new initiative Futureense.uni, aims to transform tech education, together with top educational institutions in the country. Futureense leverages the well-established educational ecosystem of universities and combines it with its own next-gen outcome-focused approach through immersive learning experiences and building future-proof careers.

Let's get in Touch

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