



IIM NAGPUR

jaro education

# PG Certificate Programme In Data Science For Business Excellence And Innovation

**BATCH 03**

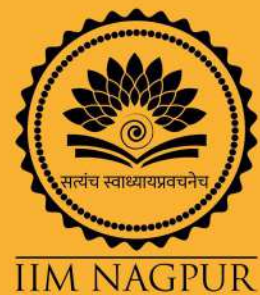


# About IIM Nagpur

Established in 2015, the Indian Institute of Management Nagpur (IIMN) aspires to be a leading management institution that shapes management systems, policy and governance through high-quality education, research and industry engagement. Propelled by the pursuit of engaged scholarship, the Institute aims to create value-driven leaders and global managers with strong conceptual foundations and analytical approaches, which helps them excel in diverse spheres - be it management, business, policymaking, and public administration, to name a few.

IIM Nagpur aims to address the needs of a modern India; connecting aspirations and realities to attain benchmarks that are respected internationally. Our motto, सत्यं च स्वाध्यायप्रवचने चं, that is, an inspiring journey towards truth through individual reflection and collective discourse, propels our quest to bridge the gap between abstract knowledge and practice.

IIM Nagpur seeks to distinguish itself as an institution that promotes constant industry engagement of a 'problem-solving' nature. Executive Education, therefore, is an important thrust area for the Institute. With an array of programmes designed by a faculty body with a stellar record of research, teaching and industry engagement, the Executive Education programme at IIM Nagpur equips managers and executives with the capabilities to perform effectively in their current roles, and take up greater challenges through various stages of their careers.



# Director's Message



**Dr. Bhimaraya Metri**  
Director, IIM Nagpur



*With its unique advantages, IIMN is an exciting place to learn, grow and be the 'champions of change'.*

I take pleasure to welcome you to IIM Nagpur (IIMN). IIMN was established in 2015 as the first of the third generation IIMs, by the Ministry of Education, Govt. of India at the orange city Nagpur which is equidistant (in terms of travel time by air) from major metropolises -Delhi, Chennai, Kolkata, Mumbai. Its' a thriving and fastest-growing city that stands positioned as the logistics capital of India, providing fertile ground for business ventures.

The striking feature of IIMN's state-of-the-art new campus, spread over 132 acres, is its location in the heart of the industrial hub within the country's first Multi-product Special Economic Zone at MIHAN, adjacent to Dr Babasaheb Ambedkar International Airport, Nagpur. Thus, IIMN enjoys a natural advantage of being near to industry, enabling greater connections and partnerships with businesses across the sectors in SEZ and MIDCs. IIMN's unwavering focus on pioneering exceptional industry partnerships to lead the way in providing real-world experiences prepares our management graduates for life by bringing '**corporate into classrooms**' to produce relevant talent for the corporate world.



# Programme Director \_\_\_\_\_.



## Dr. Kapil Kaushik

FPM, IIM Indore

B.Tech - Computer Science

**Dr. Kapil Kaushik** is a faculty in the area of Decision Science and Information Systems at IIM Nagpur. He was previously associated with Infosys analytics unit as associate data scientist, wherein he worked on projects and solutions related to forecasting, assortment planning, optimization, anomaly detection, and text analytics. His teaching and research interests include text mining, data analytics, and marketing analytics, customer engagement at digital platforms, sports sponsorship, e-commerce, and data science for public policy.



# Contents

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■	<b>Future of Data Science</b>	<b>5</b>
■	<b>Programme Overview</b>	<b>6</b>
■	<b>Key Highlights</b>	<b>6</b>
■	<b>Programme Objectives</b>	<b>7</b>
■	<b>Learning Outcomes</b>	<b>8</b>
■	<b>Programme Content</b>	<b>9</b>
■	<b>Pedagogy</b>	<b>12</b>
■	<b>Specimen Certificate</b>	<b>13</b>
■	<b>Programme Details</b>	<b>14</b>
■	<b>Fee Structure</b>	<b>14</b>
■	<b>Recent Batch Analysis</b>	<b>15</b>
■	<b>About Jaro Education</b>	<b>16</b>



# Future of Data Science Innovation in Exploration \_\_\_\_\_.

“

*The market size of **Data Science platforms** is expected to reach **178 billion US Dollars by 2025**. The US Bureau of Labour Statistics has stated that the jobs requiring Data Science skills will rise by **27.9% by 2026**.*

”

Source : College Dunia



# Programme Overview ---

In the disruptive digital age, AI and ML are emerging to produce a massive potential to automate business routines, enabling tomorrow's businesses to make smart decisions, understand the market better and effectively align market resources. Delve into new-age data science techniques and tools and upskill from India's top-ranked institute, IIM Nagpur's PG Certificate Programme in Data Science for Business Excellence and Innovation.

Embark on a learning path to identify relevant use cases catering to new-age AI/ML techniques. Master the alchemy of people, data science tools and innovative strategies to attain an edge over competitive advancement. Learn how to redefine appropriate analytical solutions, implement the prescribed solutions and imbibe the output for strategic and operational activities to transform organizations. Pedagogy builds a benchmark with an extensive blend of lectures, case-based discussions, hands-on training and much more.

## Key Highlights ---



PG Certification &  
Alumni Status-IIM Nagpur



Case Study  
Based Learning



Personal Mentoring and  
Consultation from Faculty



Gain exposure to the New-Age  
Tools like AI/ML, Tableau, R,  
Python, etc.



Chamber Consultation Sessions



Exposure to working on real-time  
business problems and solutions



# Programme Objectives \_\_\_\_\_.

## 1 To provide participants with an understanding of:

- Basic concepts and methods in machine learning, AI & Analytics consulting
- Popular algorithms for processing and analysing structured and unstructured data
- Data visualization tools and techniques
- Big Data Management

## 2 Help develop the ability to:

- Communicate effectively using data visualization and story-telling
- Conceptualize the application of analytics across various functions of organization
- Understand business problems to be solved using analytics
- Integrate standalone components of analytics solution into one unified solution





# Learning Outcomes \_\_\_\_\_.



Managerial understanding of the tools & techniques used in Data Science and Machine Learning



Skills to make data-driven, real-time, day-to-day organisational decisions



Understanding of the concepts of statistics to make strategic business decisions



Skills to implement machine learning algorithms



In-depth understanding of data structure and data analysis

## DATA SCIENCE



ANALYSIS



STRUCTURE



ALGORITHM



PROCESS



PROGRAMMING



SOLVING



KNOWLEDGE

# Programme content

## **Data Visualization, story-telling and Business Communication**

- Data Visualization using Tableau
- Story-telling using data
- Business communication
- Data Advocacy

## **Modern Data Management and cloud technologies**

- Ethical and Legal considerations related to data
- Big Data, Data lakes, and data pipelining
- Cloud Technologies for data analytics

## **Data Analytic Tools**

- R
- Python

## **Business Statistics**

- Probability
- Statistical Distributions
- Hypothesis Testing



## **Machine Learning Algorithms**

- Cluster Analysis
- Association Rule Mining
- Recommendation Systems
- Regression and Decision Tree Models
- Artificial Neural Networks

## **Forecasting and other Statistical Methods**

- Time-Series Analysis
- Logistic and Poisson regression
- ML Forecasting Models
- Statistical Models (Eg. PCA Regression, Cox Regression)

## **Prescriptive Analytics**

- Prescriptive Analytics
- Optimization
- Business Simulation
- Simul8

## **Deep Learning and Artificial Intelligence**

- Natural Language Processing
- Chat bot
- Computer Vision / Image Analytics

## **Analytics Consulting and Industry Overview**

- Business consulting using analytics
- Healthcare analytics
- Contemporary analytics applications across the industry

## **Innovate, Industrialize, and Transform using data analytics**

- Innovation and Design thinking
- Change Management
- Adoption of analytics applications
- Business process transformation

## **Capstone Project**



# **DATA SCIENCE**



# Pedagogy



The programme curriculum will be a mix of lectures, case-based discussions and hands-on training



Each machine learning technique will be taught using a relevant business case. Participants will get exposure to working on various real-time business problems and their solution through Data Analytics



Hands on experience on tools such Microsoft Excel, Tableau, R, Python, Simul8, etc. will be given to participants

# Specimen Certificate \_\_\_\_\_.

## POST GRADUATE CERTIFICATE PROGRAMME IN DATA SCIENCE FOR BUSINESS EXCELLENCE AND INNOVATION

for those who successfully complete the prescribed programme of  
Data Science and fulfill all the academic requirements.



The image shows a specimen certificate from IIM Nagpur. It features the IIM Nagpur logo on the left, which includes a sun-like emblem and the text 'भारतीय प्रबंध संस्थान नागपुर' and 'Indian Institute of Management Nagpur'. To the right of the logo, it says 'Executive Education' and 'IIM NAGPUR'. In the top right corner, there is a placeholder for a roll number: '[Roll No. 000000]'. The main title of the certificate is 'Certificate of Completion'. Below this, it states 'This is to certify that' followed by a placeholder for the participant's name, 'Participant Name', which is written in a stylized font. Below the name, it says 'has successfully completed the' followed by the program name: 'Post Graduate Certificate Programme in Data Science for Business Excellence and Innovation'. At the bottom, there is a placeholder for the dates: 'held during / / to / /'. At the very bottom, there are four signature lines with labels: 'Programme Director', 'Programme Director', 'Chairperson, Executive Education', and 'Director, IIM Nagpur'.

**Executive Education**  
**IIM NAGPUR**  
भारतीय प्रबंध संस्थान नागपुर  
Indian Institute of Management Nagpur

[Roll No. 000000]

**Certificate of Completion**  
This is to certify that  
*Participant Name*  
has successfully completed the  
**Post Graduate Certificate Programme in  
Data Science for Business Excellence and Innovation**  
held during / / to / /

Programme Director      Programme Director      Chairperson, Executive Education      Director, IIM Nagpur



# Programme Details \_\_\_\_\_.

<b>Programme Duration</b>	1 Year
<b>Programme Schedule</b>	Day: Sunday Timings: 10:00 AM to 01:00 PM
<b>Mode of Delivery</b>	Direct-to-Device (D2D)
<b>Chamber Consulting Sessions</b>	For Every Course
<b>Campus immersion</b>	Campus visit* of 3 days at the end of the programme for project presentations and Valediction
<b>Eligibility</b>	Minimum 50% in Graduation from a recognized National or International University  Minimum 2 years of work experience

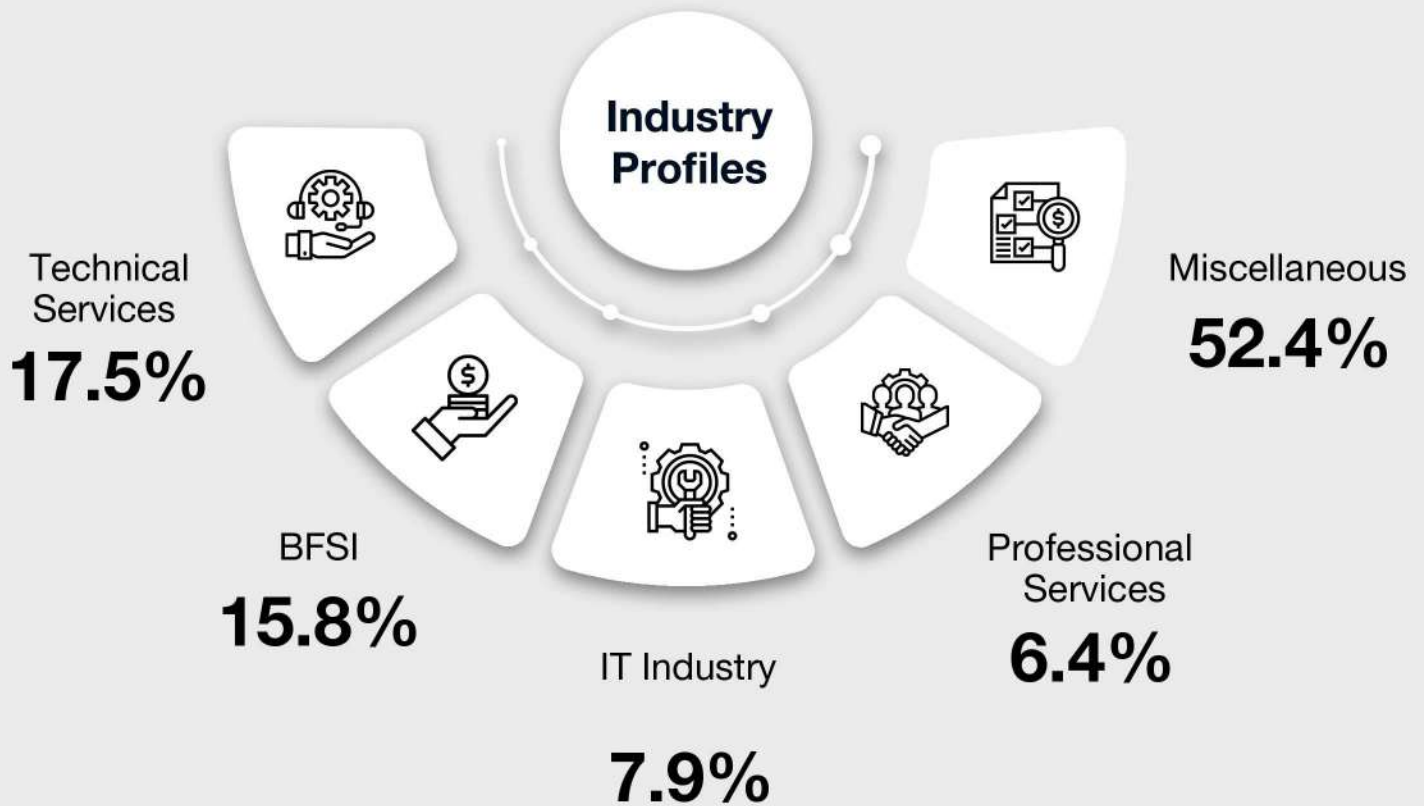
\*subject to prevailing Government rules pertaining to the pandemic

# Fee Structure \_\_\_\_\_.

Application Fee	INR 2,000/- (exclusive of GST)
Programme Fee	INR 2,40,000/- + 18% GST
<b>Installment Pattern</b>	
First Installment	INR 80,000/- + 18% GST
Second Installment	INR 80,000/- + 18% GST
Third Installment	INR 80,000/- + 18% GST

# Recent Batch Analysis \_\_\_\_\_.

## Industry profile:



## Work Experience:





# From Our Participant

The participant of the **PG Certificate Programme in Data Science for Business Excellence and Innovation – IIM Nagpur**, shares his experience:



**Mr. Sumit Sharma**

Senior Director,  
Media Operations, GroupM

My experience with the program was excellent. We were provided up-to-date material for reference and well-briefed on every aspect of the course. Moreover, it captures all the aspects in line with future requirements, and we were provided proper guidance and support. The class size was more than 60 students and the average experience level was more than 12 years. This created a great opportunity to learn all-around. We not only had the IIM Nagpur faculty teaching this course, market experts and industry leaders also took us through their domains.

Looking back to the start of my career, I come from a digital background. Later, I switched my domain to the technical operations side of the business. My vision was to lean more towards the Data side of the business so that I can help my organization by delivering a better quality of work. As we live in a data-driven era, I chose to opt for this program and pursue this domain. It is sought-after as it leads to a tangible and measurable business outcome. The past 6 months have been phenomenal. The time I have been investing has paid off, as I have gained learning in terms of tools, concepts, advancement in the world of data science, etc.

Overall, Jaro Education did a fantastic job in helping us understand how it becomes pretty easy when you have a facilitator or an organization whose vision is to drive knowledge to people as much as it can.

[Click here to watch the full video](#)

# About Jaro Education \_\_\_\_\_.

**“INDIA'S MOST TRUSTED  
ONLINE HIGHER  
EDUCATION COMPANY”**

**1000+**  
Corporate Associations

**3,00,000+**  
Careers Transformed

**2009**  
Enhancing Career Since



**2022**  
EdTech Leadership Award



**2022**  
National Best Employer Accolade



**2019**  
Economic Times Award



**2018**  
ABP Education Award



**2017**  
Modi Award

Jaro Education is India's most trusted online higher education company and a pioneer in the Executive Education space since July 2009. Our aim is to nurture managers, leaders, and entrepreneurs in every field and industry by guiding them to choose and opt for an apt course that caters to their requirements. With its strong domain expertise and insightful online programmes, Jaro Education has transformed the careers of over 3,00,000 professionals in the last 13 years through its 20+ centers across India.

IIM Nagpur has empanelled Jaro Education for promotion and admission support of Post Graduate Certificate Programme in Data Science for Business Excellence and Innovation.