



# Programme Details of

# 4 Days Professional Certification Training Programme on

# **"Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals"**

(Saturdays and Sundays - Weekend Batch)



Training Programme Organized Exclusively for College/University Students and Certified by:

NSIC -TSC (National Small Industries Corporation - Technical Services Centre, Okhla, Delhi), A Government of India Enterprise, under Ministry of Micro, Small and Medium Enterprises

# **Conducted: Online through Zoom**





### Introduction

In today's rapidly evolving technological landscape, artificial intelligence (AI) and machine learning (ML) are shaping the way we work, make decisions, and solve complex problems. The field of artificial intelligence (AI) and machine learning (ML) is experiencing a surge in job opportunities as businesses across various industries recognize the transformative potential of these technologies.

In India, the landscape of artificial intelligence (AI) and machine learning (ML) job opportunities is expanding rapidly as industries embrace digital transformation. With a burgeoning tech sector and a growing emphasis on innovation, the demand for skilled professionals in this field has surged. Various job roles are emerging across different sectors, creating exciting prospects for those entering or transitioning into AI and ML careers in India.

### Opportunities available within AI & ML for Non-tech Professionals & MBAs

One common misconception is that AI and ML jobs are exclusively for tech-savvy individuals. In reality, these fields have diverse opportunities for professionals from various backgrounds including management. Following are the numerous roles within the field of artificial intelligence (AI) and machine learning (ML) where individuals from non-tech backgrounds can contribute effectively:

### 1. AI Project Manager:

- Oversee AI projects, ensuring they align with organizational goals.
- Manage timelines, budgets, and deliverables.

### 2. AI Product Manager:

- Shape the development of AI-powered products.
- Understand market needs and user requirements.

### 3. AI Business Analyst:

- Bridge the gap between technical teams and business stakeholders.
- Analyze business processes and identify opportunities for AI implementation.

### 4. AI Sales and Marketing Specialist:

- Develop marketing strategies for AI solutions.
- Communicate the benefits of AI in a non-technical manner.





### 5. AI Ethicist/Policy Analyst:

- Address ethical considerations in AI development.
- Develop policies and guidelines for responsible AI use.

### 6. AI Education and Training Specialist:

- Create educational materials and training programs on AI.
- Train teams and professionals on AI concepts and applications.

#### 7. AI Content Creator/Communications Specialist:

- Develop content explaining AI concepts in non-technical terms.
- Create marketing materials, blog posts, and videos about AI.

#### 8. AI Healthcare Navigator:

- Facilitate the integration of AI technologies in healthcare.
- Collaborate with healthcare professionals to identify AI applications.

#### 9. AI Human Resources Specialist:

- Identify AI talent for recruitment.
- Develop AI training programs for existing staff.

These roles showcase the diversity of opportunities within the AI field that welcome individuals from management and non-tech backgrounds. By combining domain expertise with a basic understanding of AI concepts, these professionals can contribute meaningfully to the development, implementation, and ethical use of AI technologies.

### **Demand of AI & ML Skilled Professionals**

It is noteworthy that the demand for AI and Data Analytics professionals is intensifying across sectors, spanning IT, retail, automotive, healthcare, BFSI, manufacturing, and telecom. As per the latest NASSCOM Report, there is a significant gap between the current demand and supply of AI professionals, estimated to be about 51% and projections indicate an exceeding demand of 1 million AI professionals in India by 2024, necessitating robust skill development initiatives. This competitive landscape has demand of skilled workforce for entry, mid and senior-level positions which are fuelled by talent crunch. The average package is ₹ 7.20 lac for entry level, while salaries start at ₹50-60 lakh for mid-level roles.





At the same time, the knowledge and practical application of AI and Business Analytics by management professionals is becoming increasingly crucial for industry as managers can effectively leverage AI and data-driven insights to make informed decisions and drive strategic initiatives in an efficient manner. Hence, the imperative to train management professionals in AI and Business Analytics has surged tremendously in India. And there lies immense scope of growth and job opportunities for non-tech and MBA graduates.

With a view to accelerate the supply of skilled professionals, National Small Industries Corporation- Technical Services Centre (NSIC-TSC) with its Technical Skill Partner BloomAge Skill India (BSI) is conducting Industry Demand-driven 4 days Professional Training Programme on "Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals", offered through Online mode for maximum participation and benefit.

### **Objectives of the Training Programme**

The Professional Training Programme on "Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals" aims to empower participants of non-tech and non-programming backgrounds with a comprehensive understanding of artificial intelligence (AI) and machine learning (ML). It is ensured through:

- The training programme begins with foundational knowledge, exploring real-world applications, and providing an algorithmic overview in a non-programming format.
- Emphasis is placed on data quality, training, and evaluation techniques, with a focus on both supervised and unsupervised learning.
- The course delves into advanced topics such as neural networks and ethical considerations.
- Participants will also learn how to integrate AI and ML in business contexts and cultivate effective collaboration with AI experts, ensuring a well-rounded and applicable skill set in this dynamic field.
- The Capstone Project will validate the learning and enhance participants' competitiveness by applying acquired skills in real-world scenarios, ensuring readiness for job interviews.





### **Course Content**

The course content is designed to equip participants with a holistic understanding of Artificial Intelligence (AI) and Machine Learning (ML) and to imbibe the requisite skills and knowledge among them as demanded by the industry. The integration of Capstone Project in the training programme ensures the validity of learning and enhances participant's competitiveness during the job interviews. Following topics are covered during the Training Programme:

- 1. AI and ML Fundamentals: Delve into core concepts and definitions.
- 2. Evolution, Components & Types of AI: Explore the evolution of AI & intricacies of AI
- 3. Machine Learning Algorithms Overview: Understand algorithms in an interactive, non-programming format.
- 4. **Data Quality and Pre-processing:** Emphasize the importance of data quality and handling imperfect data.
- 5. Training and Evaluation Techniques: Master ML model training and evaluation.
- 6. **Supervised Learning Techniques:** Explore predictive modeling with regression, classification.
- 7. **Unsupervised Learning:** Dive into clustering algorithms, association technique and dimensionality reduction (e.g., PCA).
- 8. **Neural Networks and Deep Learning:** Get acquainted with artificial neural networks, deep learning architectures, and practical applications like ChatGPT.
- 9. **Types of Neural Networks:** Explore the details of essential neural networks for implementation
- 10. Ethical Considerations in AI: Scrutinize biases, fairness, transparency, and accountability in AI systems.
- 11. **Top 10 AI Tools for Implementation:** Harness the power of AI by examining various case studies based on real application of AI tools in Business
- 12. **Collaboration with AI Experts:** Develop effective communication and collaboration skills with AI professionals, gaining insights into their roles and perspectives.
- **13.** Capstone Project for Validation of Learning





### **Learning Outcomes**

Upon completion of this specialized program tailored for non-tech professionals and MBA participants, individuals can expect to attain a robust skill set and practical understanding of key concepts in artificial intelligence (AI) and machine learning (ML).

- 1. Participants will develop a solid foundation in AI and ML fundamentals, gaining proficiency in real-world applications across diverse industries.
- 2. Through interactive sessions, non-programming format exposure to machine learning algorithms, and an emphasis on data quality and preprocessing, participants will acquire essential skills for handling and analyzing data effectively.
- 3. The program will empower them to master ML model training, evaluation techniques, and the application of supervised and unsupervised learning methods.
- 4. Additionally, participants will gain insights into advanced areas such as neural networks, deep learning, and ethical considerations in AI.
- The integration of AI and ML in business contexts will equip non-tech professionals and MBAs with the ability to make data-driven decisions, automate processes, conduct predictive analytics, and extract valuable customer insights.
- 6. The program also focuses on developing effective communication and collaboration skills with AI experts, ensuring that participants emerge as well-rounded professionals ready to navigate the dynamic landscape of AI and ML in their respective roles.

### Who Should Attend

The course is suitable for students across various domains, including:

- 1. Management Graduates and MBA/PGDM/BBA Students
- 2. Social Sciences and Humanities students
- 3. Law students
- 4. Computer Science, BCA, MCA or any other student interested in learning AI and ML

### Certification

Certificate will be issued by NSIC -TSC (National Small Industries Corporation - Technical Services Centre, Okhla), A Government of India Enterprise, under Ministry of Micro, Small and Medium Enterprises.





### Fees

The fees of the 4 Days Online Professional Certification Training programme on "Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals" for College/University students is  $\mathbf{\overline{\xi}}$  **3,500 per participant (inclusive of all).** This is inclusive of Training fees, Capstone Project, Course material in soft copy, study material and certificate issued by NSIC -TSC (National Small Industries Corporation - Technical Services Centre, Okhla), A Government of India Enterprise, under Ministry of Micro, Small and Medium Enterprises. The same Professional Training Programme is conducted for the professionals and general public at  $\mathbf{\overline{\xi}}$  6,000 per participant.

**Note** - The Professional Certification Training programme on "Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals" is conducted by NSIC-TSC in partnership with its Technical Skill Partner BloomAge Skill India (BSI).

Scan the given QRCode to pay the fees of ₹ 3,500 for 4 Days Online Professional Certification Training programme on "Fundamentals of Artificial Intelligence and Machine Learning for Non-Tech Professionals"



### **Contact Details**

For more details, contact Ms. Parul Puri, Project Coordinator and an Accredited Master Trainer from Government of India.

+91-9818085814, +91-8368666544

Email: training@nsictsc-bsi.co.in, rajivnath@nsic.co.in, nsictsco.bsi@gmail.com,





## Registration

Please scan the QR Code to fill the registration form:



Alternatively, the participants can fill and submit the Registration form through the following link: <u>https://forms.gle/gkRRcEnj1Lyn9XXQ9</u>

The registered participants will be added to Whatsapp group for regular updates and information.

## Benefits of attending the Training programme

The main benefit of attending this program lies in its pioneering approach because it's a First of its kind tailored specifically for non-tech professionals.

- 1. The government certification, coupled with a Capstone Project, adds substantial validity and recognition to the acquired skills, enhancing participants' credibility in the job market.
- 2. The program's affordability, characterized by lower fees, makes it accessible to a broader audience.
- 3. Additionally, the online mode of delivery ensures comfort and convenience for participants, allowing them to acquire valuable AI and machine learning knowledge without disrupting their professional commitments. Overall, this program stands as a unique and accessible opportunity for non-tech professionals to upskill in the dynamic fields of AI and ML.





# Programme Details of

# 4 Days Professional Certification Training Programme on

# "Business Intelligence Analyst"

(Saturdays and Sundays - Weekend Batch)



# Training Programme Organized Exclusively for College/University Students and Certified by:

NSIC -TSC (National Small Industries Corporation - Technical Services Centre, Okhla, Delhi), A Government of India Enterprise, under Ministry of Micro, Small and Medium Enterprises

# Conducted: Online through Zoom





#### <sup>IC</sup> Introduction

In today's data-driven landscape, Business Intelligence Analysts (BIA) are indispensable, wielding growing importance in organizations globally. With businesses relying on informed decisions, these analysts interpret complex data, uncovering patterns and trends that drive strategic insights. Their ability to transform raw data into actionable intelligence not only enhances operational efficiency but also positions companies competitively. Business Intelligence Analysts play a pivotal role in shaping organizational strategies, optimizing processes, and fostering a culture where data is a cornerstone for innovation and success.

### Why MBAs Are Ideal for BIA Roles

A Business Intelligence Analyst equipped with an MBA brings a dynamic blend of strategic vision and analytical prowess to the realm of data-driven decision-making. Leveraging the comprehensive business acumen acquired through an MBA program, this professional excels in translating complex data into actionable insights that steer organizational success. With a strategic mindset and an understanding of cross-functional dynamics, the Business Intelligence Analyst with an MBA not only navigates intricate datasets but aligns data analytics seamlessly with overarching business objectives. Proficient in effective communication, project management, and ethical considerations, this professional emerges as a key asset, fostering a culture of informed decision-making and propelling businesses towards sustained growth.

# **Opportunities available within Business Intelligence (BI) for MBAs and Non-tech Professionals**

A common misconception is that Business Intelligence (BI) is exclusive to tech experts. In reality, BI welcomes diverse professionals. Its emphasis on data-driven decision-making makes it accessible and valuable for non-tech individuals, offering insights crucial for strategic planning across various industries. Following are the diverse opportunities available for non-tech professionals and individuals with MBAs within the field of Business Intelligence (BI):

- 1. BI Business Analyst:
  - Translate business requirements into BI solutions, facilitating effective decision-making.
- 2. BI Project Manager:
  - Oversee BI projects, ensuring timely delivery and alignment with business goals.





3. BI Consultant:

- Provide expertise to clients, offering BI solutions tailored to their specific needs.

4. BI Product Manager:

- Shape and manage BI products, ensuring alignment with market needs and business objectives.

- 5. BI Sales and Marketing Specialist:
  - Promote BI solutions, translating technical benefits into business value for clients.
- 6. BI Education and Training Specialist:
  - Develop and deliver training programs on BI tools and methodologies.
- 7. BI Content Creator/Communications Specialist:
  - Develop content explaining BI concepts in non-technical terms for diverse audiences.
- 8. BI Human Resources Specialist:
  - Utilize BI for HR analytics, talent acquisition, and workforce planning.
- 9. BI Finance Analyst:
  - Analyze financial data, supporting strategic financial decision-making.
- 10. BI Operations Analyst:
  - Optimize business operations by analyzing and improving processes using BI.
- 11. BI Customer Insights Analyst:
  - Analyze customer data to enhance marketing strategies and improve customer experience.
- 12. BI Supply Chain Analyst:
  - Apply BI to optimize supply chain processes and improve efficiency.
- 13. BI Risk Analyst:
  - Assess and mitigate business risks using BI insights and analytics.
- 14. BI Social Media Analyst:
  - Analyze social media data for marketing insights and brand sentiment analysis.

These roles highlight the diverse opportunities within Business Intelligence that welcome individuals with non-tech backgrounds and MBAs. By leveraging analytical skills and combining them with domain expertise, professionals can contribute meaningfully to the growing field of Business Intelligence.





#### <sup>6 | C</sup> Demand of Business Intelligence Analysts (BIA) in India

As of recent assessments, there is a noticeable supply and demand gap in the field of Business Intelligence Analysis (BIA) in India. The demand for skilled BI analysts has been steadily increasing, driven by the growing importance of data-driven decision-making in businesses. However, the supply of qualified professionals with expertise in Business Intelligence has not kept pace, leading to a discernible gap in the market. This scarcity of skilled BIA professionals underscores the potential opportunities for individuals seeking to enter or advance in this dynamic field.

The annual salary for a Business Intelligence Analyst in India averages at INR 8,58,145. The salary range spans from INR 6 lakhs to INR 13 lakhs, with senior analysts earning up to ₹13L/yr. Additional cash compensation for candidates in this role varies from INR 30,000 to 1.3 lakhs per annum.

With a view to accelerate the supply of skilled professionals, National Small Industries Corporation- Technical Services Centre (NSIC-TSC) with its Technical Skill Partner BloomAge Skill India (BSI) is conducting Industry Demand-driven 4 days Professional Training Programme on "Business Intelligence Analyst" for students, offered through Online mode for maximum participation and benefit.

### **Objectives of the Training Programme**

The Professional Training Programme on "Business Intelligence Analyst" aims to empower participants of management, non-tech and non-programming backgrounds to define BI and apply regression analysis in real-world scenarios and to gain hands-on expertise for strategic decision-making in the evolving landscape of business intelligence. It is ensured through:

1. **Introduction to Business Intelligence:** To be able to define BI, emphasize Market Research's role, and introduce Statistical Analysis and Tools.

2. Conceptual Framework of Market Research: Explore Market Research types, unveil effective processes, and master robust data collection techniques.

3. **Basic Data Analysis and Descriptive Statistics:** Introduce Data Analysis principles, delve into Descriptive Statistics, and apply with Excel exercises.

4. **Reporting and Visualization in Excel:** Able to Craft Basic and Advanced Excel charts, showcasing customization for effective analysis.





5. **Business Performance Monitoring and Advanced Market Research:** Understand Inferential Statistics, explore Advanced Market Research in Excel, and apply methods.

6. **Decision Support, Predictive Modeling, Regression Analysis, and Case Study:** Understand Correlation, Predictive Modeling, Regression Analysis, integrate SWOT and apply to a case study in Excel.

7. **Capstone Project:** To be able to apply acquired skills in a comprehensive Capstone Project for practical implementation and consolidation.

### **Course Content**

This training program is meticulously crafted to provide participants with a comprehensive grasp of Business Intelligence Analysis (BIA). Covering essential topics, from foundational principles to advanced techniques, the curriculum aims to instill the skills and knowledge demanded by the industry. The inclusion of a Capstone Project ensures not only the depth of understanding but also validates the learning, enhancing participants' competitiveness in job interviews and real-world applications. Following topics are covered during the Training Programme:

### 1: Introduction to Business Intelligence:

- Understanding Business Intelligence: Definition and Significance
- Emphasizing the Role of Market Research in Business Intelligence
- Fundamentals of Statistical Analysis
- Overview of Statistical Tools

### 2: Conceptual Framework of Market Research:

- Exploring Types of Market Research
- Unveiling the Process of Effective Market Research
- Mastering Sampling Techniques for Robust Data Collection

### 3: Basic Data Analysis and Descriptive Statistics:

- Introduction to Data Analysis Principles

- In-Depth Study of Descriptive Statistics: Mean, Median, Mode, Variance, Standard Deviation, and Coefficient of Variation

- Practical Application: Hands-on Exercise with Basic Descriptive Statistics Analysis using Excel





### <sup>C</sup> 4. Advanced Techniques of Reporting and Visualization in Excel:

- Crafting Basic and Advanced Charts in Excel
- Demonstrating Customization for Effective Visualization and Analysis

# 5. Business Performance Monitoring, Inferential Statistics, and Advanced Market Research:

- Understanding Inferential Statistics: Hypothesis Testing and Various Analytical Tests

- Exploring Advanced Market Research Techniques in Excel

- Application Focus: Hands-on Exercise Applying Advanced Market Research Methods using Excel

### 6. Decision Support, Predictive Modeling, Regression Analysis and Case Study:

- Introduction to Correlation and its Significance
- Overview of Predictive Modeling
- Understanding Regression Analysis
- SWOT Analysis Integration
- Group Activity: Applying Regression Analysis to a Market Research Case Study in Excel

### 7. Capstone Project:

- Participants will apply the acquired skills and knowledge to a comprehensive Capstone Project, ensuring practical implementation and consolidation of the learned concepts.

### **Learning Outcomes**

Upon completion of this specialized program tailored for non-tech professionals and MBA participants, individuals can expect to attain a robust skill set and practical understanding of key concepts of Business Intelligence.

- 1. The participants will gain a comprehensive understanding of Business Intelligence and recognize its strategic significance.
- 2. Able to articulate the integral role of Market Research in driving effective Business Intelligence.
- Acquire proficiency in fundamental Statistical Analysis principles and diverse Statistical Tools.
- 4. Apply Descriptive Statistics using Excel, enhancing practical analytical skills.
- 5. Utilize advanced techniques, including Inferential Statistics and Regression Analysis, for nuanced market research insights.





6. Demonstrate learned concepts through a hands-on Capstone Project, ensuring practical application and skill consolidation.

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- 2. The program's affordability, characterized by lower fees, makes it accessible to a broader audience.
- 3. Additionally, the online mode of delivery ensures comfort and convenience for participants, allowing them to acquire valuable Business Intelligence learning knowledge without disrupting their professional commitments. Overall, this program stands as a unique and accessible opportunity for Management and non-tech professionals to upskill in the dynamic fields of Business Intelligence.





The fees of the 4 Days Online Professional Certification Training programme on "Business Intelligence Analyst" for College/University students is ₹ 3,500 per participant (inclusive of all). This is inclusive of Training fees, Capstone Project, Course material in soft copy, study material and certificate issued by NSIC -TSC (National Small Industries Corporation - Technical Services Centre, Okhla), A Government of India Enterprise, under Ministry of Micro, Small and Medium Enterprises. The same Professional Training Programme is conducted for the professionals and general public at ₹ 6,000 per participant.

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Venue: Zoom Video