

Artificial Intelligence and Data Science Engineering: A complete guide

‘Can machines think?’ a simple question by mathematician Alan Turing stimulates our thoughts over Artificial Intelligence (AI) and the journey of machines in our life. There was a time when machines were looked upon as alien objects and used only when absolutely necessary. Leaving those times far behind, we have come to an age where machines form an integral part of our lives.

AI has seeped into every sphere of human existence making life without machines seem impossible. More and more machines have started being ‘smart’, increasing human dependence on them. Data Science is another technology that makes use of AI for its operations but at the core, both AI and Data Science are here to aid human beings.

We often come across phrases like ‘AI and Data Science are redefining the global market’. But what exactly are Artificial Intelligence and Data Science? And why are they so crucial to the contemporary world? This blog attempts to answers these questions along with courses, career options, scope, and skills required for this field. So, let’s delve right into it!

What is Artificial Intelligence and Data Science?

Often the words **Artificial Intelligence** immediately bring in mind pictures of robots or giant human-like machines. But there’s a lot more to AI than that. Today, when we look around, we see immense technological advances. The driverless cars, smart hands-free devices, and robots working in factories, all prove that intelligence induced in machines is possible.

AI Engineering involves training students to build smart machines that can perform tasks that previously required humans. It’s an effort of transporting human intelligence into machines, enabling them to perform human tasks using learning, reasoning, perception, and problem-solving skills. It simply means replicating human intelligence in machines. Artificial Intelligence market is expected to grow exponentially in the future. It is globally recognized as a key driver of digital transformation. With time AI has become more efficient and can undertake complex human activities.

Moving on to **Data Science**, every sector of the economy now has access to more data than would have been imaginable even a decade ago. Businesses today are accumulating a tremendous amount of data to extract value from it. This data helps to understand the customers, their buying patterns, their preferences, and everything related to it. Business giants rely on this to better their products, making it more efficient than their competitors. These companies have a glaring question of trading across this huge amount of data and using it efficiently. They need professionals who can guide them for this. It involves the skills in data extraction, manipulation, and maintenance to forecast the future market conditions. Hence, there is a dire need for AI and Data Science professionals in the global market.

What is Scope of Artificial Intelligence and Data Science Engineering?

A couple of decades earlier, a machine that could calculate numbers like humans was an astonishing thing. But today, machines have evolved exponentially, undertaking complex human activities. Calculating numbers and other basic tasks are considered to be inherent to them. AI

has made this possible. And this is also proof of AI being a constantly evolving field offering tremendous career expansion opportunities to students.

The global market is witnessing a 4th Industrial Revolution with the emergence of AI and Data Science. Industry giants are hiring AI and Data Science Engineers in huge numbers. This has widened the scope of this field tremendously. This is because, though machines carry out complex human activities through AI, at the core there still needs to be human intelligence to make that happen. And this involves AI professionals on a large scale.

Talking about Data Science, as we already saw, companies around the world have accumulated a huge amount of data not just of their own but also of their competitors. This data needs to be analysed, processed, and used for understanding customer behaviour and everything related to it. When used efficiently, it's like a magic wand transforming businesses and getting huge profits for organizations in no time. Hence, it's safe to say that AI and Data Science are extremely fertile fields that offer promising careers to students globally!

Career Opportunities & Job Profiles After Artificial Intelligence and Data Science Degree

The constant technological advancement is an underlining factor in making AI and Data Science, the need of the hour. Their dire need is witnessed times and again with an increasing number of AI and Data Science Engineers been hired by top national and multinational companies. The graduates of this field have a huge scope for career expansion. They can get hired for the following job profiles: -

1. Machine Learning Engineer
2. Data Scientist
3. Business Intelligence Developer
4. Research Scientist
5. Big Data Engineer/Architect
6. MIS Reporting Executive
7. Business Analyst
8. Data Analyst
9. Statistician
10. Business Development Manager
11. ML Intelligent System Researcher
12. Robotics engineer
13. Video Game Programmer
14. Software Engineer
15. Data Mining Analyst

Required skills

For being an AI and Data Science expert, one needs to possess the following skills: -

1. Analytical thinking
2. Future-oriented vision
3. Innate curiosity and creativity
4. Teamwork and collaboration skills
5. Attention to detail
6. Statistics

7. Data Modelling
8. Programming Skills
9. Being updated with the latest advancements and market trends
10. Knowledge of the programming languages

Refining these skills and being on a lookout for the new ones can make you a proficient AI and Data Science Engineer.

B.E. Artificial Intelligence and Data Science at D. Y. Patil College of Engineering, Akurdi

D. Y. Patil College of Engineering, Akurdi (DYPCOE) offers a [Bachelor's degree program in Artificial Intelligence and Data Science Engineering](#). B.E. in AI and Data Science is a 4-years full-time program. It is approved by AICTE, New Delhi and affiliated to Savitribai Phule Pune University. This Program enables students to develop smart systems with a leading-edge combination of AI & Data Science technologies like Artificial Intelligence, Machine Learning, Data Science and Statistics, Big Data Analytics, Computer Vision, Business Intelligence, Deep Learning and Reinforce learning, Robotics, Robotic Process Automation, Genetic Algorithms, and Natural Language Processing. Both AI and Data Science are interdisciplinary in nature. They borrow subject matter from various fields including Mathematics, Statistics, Programming, etc.

The program has a dual theoretical and practical approach that enhances students' learning experience. The academic course work involves theory, fundamentals, and hands-on experience with real-world applications. The program is industry-oriented and emphasizes industry internship, projects, and entrepreneurship. This helps students get industry-ready.

The college has state-of-art infrastructure coupled with Data Science Centre of Excellence in the Department of Information Technology and AI and Cloud Centre of Excellence in association with ESDS, Nashik in the Department of Computer Engineering. It has a well-established Training and Placement cell. It enables the smooth transition of students into the professional world with soft skills, communication skills, aptitude, group discussion, and personal interview, training. The college has a stellar placement record. It welcomes top national and multinational companies for campus placements each year. The distinguished faculty of the college is certified in Data Science from IBM and in Artificial Intelligence Technologies. All these factors make DYPCOE the best place to advance your AI and Data Science career.

Admission Process for Artificial Intelligence and Data Science Degree Engineering

The admission process for AI and Data Science Engineering depends upon various factors. Each state in India along with many independent colleges and universities have their specific eligibility criteria and admission procedures. So, it's vital to prepare a list of colleges first before proceeding to check their admission processes. The basic procedure though remains the same which is, filling application forms of the preferred colleges, checking the criteria for entrance exams, and clearing it. Followed by document verification and display of merit list. Once the merit list is displayed students can proceed with paying fees and submitting other required documents. Many states and institutions have specific entrance exams. Details to which can be found online.

MHT-CET is an online entrance exam, which students need to clear for getting [B.E. AI and Data Science admission](#) in any college in Maharashtra. Combining the HSC results with the entrance

exam score will lead to the further admission process. Applicants have both online and offline modes of applications, though most of the universities these days prefer online admission process.

Eligibility Criteria for Artificial Intelligence and Data Science Degree Engineering

Each state and some individual universities have an eligibility criterion of their own. Students must check the eligibility criteria depending upon the preferred college and the state education guidelines. Here are the [eligibility criteria for B.E. AI and Data Science admissions](#) in Maharashtra: -

- The applicants must be citizens of India.
- They must have passed HSC (Class 12) with Mathematics and Physics as mandatory subjects. Apart from these, the candidates must have studied Chemistry or Biotechnology or Biology in Class 12
- Must have 50% marks in HSC (45% for reserved and PH categories)
- They must have passed SSC and HSC or Diploma in Engineering from a recognised institution or university in Maharashtra
- Must have a non-zero score in MHT-CET

Be a part of an Industrial Revolution with AI and Data Science

The current Start-up culture in India and around the world has created a dire need for AI and Data Science professionals. Not just that, AI has now penetrated the entire service sector. It has the potential of generating lakhs of vacancies for skilled professionals by 2025. Data Science has grown significantly in the last few years. Hence, there's no stopping for an AI and Data Science Engineer when it comes to career expansion.

Advance your career with the B. E. program in AI and Data Science at [D. Y. Patil College of Engineering, Akurdi](#). The institute offers world-class educational, infrastructural, and institutional facilities to students with an Industry updated curriculum, and excellent placement support. Know more about this program along with the [admission process](#), [fee structure](#), program outcomes, etc. You can also fill up a form there to get all the additional details. So, what are you waiting for? [Enroll now](#) and be a part of an Industrial Revolution with B.E. Artificial Intelligence and Data Science!

Meta description –

Know more about Artificial Intelligence and Data Science Engineering, course, career, scope, admission, etc. AI and Data Science degree offers promising careers to students globally!