FAQs

BACHELOR OF TECHNOLOGY

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

Xebia

Xebia Academic Alliance

1. **What is Artificial Intelligence and Machine Learning?**

   Imagine computers or computer programs becoming intelligent enough to imitate human behavior – this is what **Artificial Intelligence** is.

   Machine Learning is a subset of AI that uses data to solve tasks. This information is derived from probability theory and linear algebra. ML algorithms use data to learn and automatically solve tasks.

2. **Could you share an interesting example of AI and ML?**

   There are many examples of AI and Machine Learning in our world today, that touch our everyday lives, but some are not even aware of it. For example, every time you do a web search, when Netflix recommends a movie, when Facebook selects posts, when Amazon recommends a book, it is machine learning that is behind.

   Interestingly anyone who has a computer or smart phone or Smart Device, is using AI. Example: Siri, Alexa, Cortona, etc.

3. **What is the scope of Artificial Intelligence?**

   AI in Education

   AI is transforming the education Sector in an exceptional manner. The beginning of presence of AI in education is seen as Tutoring and support outside the classroom where bots become your tutor and peer.

   AI in Science and Research
   AI is making lots of progress in the scientific sector. Artificial Intelligence can oversee enormous quantities of data and processes it quicker than human minds. This makes it perfect for research where the sources contain high data volumes.

   AI in Cyber Security
   To keep data and resources secure, organizations are making massive investments in cybersecurity. The future scope of AI in cybersecurity is bright.

   AI in Data Analysis
   Data analysis can benefit largely from AI and ML. AI algorithms are capable of improving with iterations, and this way, their accuracy, and precision increase accordingly.

   AI in Transport
   The transport sector has been using AI for decades. Airplanes have been using autopilot to steer them in the air since 1912.

AI in Home

AI has found a special place in people's homes in the form of Smart Home Assistants. Amazon Echo and Google Home are popular smart home devices that let you perform various tasks with just voice commands.

AI in Healthcare

The medical sector is also using this technology for its advantages. AI is helping medical researchers and professionals in numerous ways.

For example, the Knight Career Institute and Intel have made a collaborative cancer cloud. Read about it to know more.

4. **What skills would I require to become an Ai Engineer?**

To be a proficient AI Engineer, it is essential to tune yourself with the mandatory technical skills. The candidate must be educated in both practical and theoretical concepts as pointed below:

- Statistics and Mathematics
- Machine Learning
- Deep Learning & Neural Networks
- Natural Language Processing
- Basic Programming Skills: C, C++, Java
- AI Friendly Programming Skills: Python, R
- Packages & Frameworks: ScikitLearn, PyCharm, Keras, Tensorflow
- Software Development Life Cycle
- Robotics, Instrumentation & Electronics (Optional)

5. **What are the career prospects of Artificial Intelligence?**

Jobs in the artificial intelligence industry are expected to increase by 2.3 million positions by the year 2030, and according to a report produced by Capgemini's Digital Transformation Institute, 83% of companies that use AI technologies confirm that AI is already contributing to the creation of new jobs. Artificial intelligence is being used for a variety of applications for the purpose of making computers smarter, and below are some of the jobs you can apply for with a degree and certification in AI.

Machine Learning Engineer: The role of a machine learning engineer is at the heart of AI projects and is suitable for those who hail from a background in applied research and data science with a thorough knowledge of multiple programming languages.

AI Engineer: An AI engineer builds AI models using machine learning algorithms and deep learning neural networks to draw business insights, which can be used to make business decisions that affect the entire organization.

AI Architect: AI architect is like the chief data scientist, planning the implementation of solutions, choosing the right technologies, and evaluating the evolution of the architecture as the clients' needs change.

Computer Vision Engineer: A computer vision engineer solves real-world problems by using computer vision research that is focused on a vast volume of data.

NLP Engineer: NLP Engineers are responsible for the interaction between everyday human language and a computer's ability to process and analyze natural language data.

Deep Learning Engineer: Deep Learning Engineers are experts in Machine learning and Deep Learning. Their primary responsibility is to use DL platforms and algorithms for performing specific tasks to further the bigger goal – Artificial Intelligence

AI Specialist: Most AI specialists work in applied AI; their purpose is to program computer smart systems. These systems cover a number of aspects, ranging from recognizing voices to solving complicated problems.

Data Scientist: Data scientists are charged with collecting, analyzing, and interpreting large, complex datasets by leveraging both machine learning and predictive analytics. They also play a vital role in developing algorithms that enable the collection and cleaning of data for analysis.

Business Intelligence Developer: Careers in artificial intelligence also include the position of business intelligence (BI) developer. The primary objective of this role is to analyze complex data sets to identify business and market trends.

Research Scientist: Individuals as Research Scientists are experts in multiple AI disciplines, including applied mathematics, machine learning, deep learning, and computational statistics.

6. **Which are the companies which are commonly hiring AI engineers?**

The whole industry is hiring Ai engineers but to name a few, giants like Google, Instagram, Oracle, Dell, Deloitte, JP Morgan, PayPal, Microsoft, and many are actively hiring Ai engineers as it is the need of the industry. The demand is high but skilled people are not readily available.

7. **Can I become an AI Professional? How?**

Yes Definitely! Xebia Academy under its academic alliance program is currently working with several prestigious higher education institutions organizing specialized courses for computer science students in Artificial Intelligence and other IT related programs in emerging technologies.

Xebia is providing end to end support and helping students acquire the required skills and knowledge to become Job-ready in these technologies. Industry researched and innovative curriculum along with access to knowledge repository, mentorship with experts and fun filled student engagements is provided to all the students enrolled in this program.

8. **I do not have any computer science background will I still be able to cope up with this course?**

You just need to have the passion to learn and be easily able to cope with the course. Also needs the required qualification as per the university guidelines.

9. **What is the company about?**

Xebia is a pioneering IT consultancy and Software Development Company headquartered in Netherlands with offices globally USA, UK, France, Dubai, and India. It has group of highly ambitious craftsmen and delivers high-quality training to cover all aspects of digital transformation- From digital strategy to technology implementation and full stack digital transformation.

The company provide innovative solutions and services to help organization become a digital winner.

Xebia's expert collectives specialized in Data & AI, Cloud, DevOps, Full Stack Development, Business Agility, Security, Training & Learning, Software Development, Product Management and Quality Improvement, empower our brand.

The company have collaborated with universities to provide specialized courses in the technologies which are highly demanded in the industry.

10. **Why should I choose Xebia?**

Xebia is not just a training institute, we are an IT based Consultancy with our origins in Netherlands. We are a company who is also using these technologies in our projects, and we are working live on them.

Xebia provides has introduced some unique concepts to help students learn better such as the **Agile Learning Lab.** This concept provides a world-class learning environment with infrastructure that is proven to be most conducive for collaboration, creative ideation and convenient progress tracking for learners and faculty.

This model faster innovative thinking, problem-solving and collective learning in classrooms where students can complete not just their theory and tutorials but also their practical (lab projects) tutorials with ease.

Xebia will also aid in placements and internships through the network of companies with which we are working, such as Microsoft, SAP, Amdocs, Etc.

Other benefits include regular webinars & tech talks by the industry giants, regular hackathons and tech events, world-class digital courseware, access to Xebia events, industry projects and much more.

11. Does Xebia provide any extra support (like optional topics, certifications)?

At the end of the course Xebia will provide a certification with the degree from the college for the specialization. There will be activities such as hackathons, tech sessions and Industry experts' sessions, regular webinars, and support of mentor.

Xebia will also provide support in getting internships & relevant job opportunities within Xebia and its client network.

12. What are the course delivery methodologies? How would Xebia ensure there is hands-on learning to learn the practical side of these technologies.

- **The Experiential Learning Module** is designed to provide students with hands-on experience on a wide range of technologies, while working on projects that emanate from real-world business scenarios. It not only helps them familiarize with industry standard methodologies and technologies in use by distinct industries, but also helps evaluate and identify – from their own personal experience – the role and/ or projects that they are best suited to work on.
- Students will also be assigned projects/case studies and will be expected to demonstrate the knowledge and concepts learnt in the class. The assessor will be marking students' performance on various parameters expected out of program.
- **Case Study:** Refer to real time problems that can be referred to a specific topic mentioned above which caters to a particular business/ functional use case, to make the sessions intuitive.
- **Exercises:** The context of exercises is to ensure a thorough firsthand perspective of the sessions and give programmatic exposure to the attendees. Faculty shall drive that by expressing individual topics via direct exercises as much as possible to ensure the effectiveness of the sessions.
- **Assignments:** To keep the attendees/participants engaged and enhance their learnings beyond live sessions, they shall be given access to a pool of assignments pertaining their credibility of the sessions with regards to the level of complexity, there shall be dedicated offline & online assignments for the participants to accomplish their learning imbibed.

13. Would Xebia support us with any Industry project and what mentorship support will be provided?

The content is provided by industry leaders, validated by educators and industry partners, and adopted by academic institutions globally.

Our team has worked with industry experts to provide insights into careers that are taking over the job market. The course content is aligned to this market research, which is updated regularly to ensure our material stays relevant to the needs of the industry.