



Executive Post Graduate Diploma in Healthcare Program (AI+ML+Healthcare Analytics)

www.clinilaunchresearch.in 

About CLRI

CliniLaunch Research Institute, headquartered in Bangalore, is an upskilling institution for paramedics, medics, life sciences, and other healthcare professions renowned for its excellence with top-notch training and career development. Through a blend of quality education, innovative methods, and hands-on learning, it has swiftly emerged as a leading partner for career advancements. CliniLaunch extends its reach with a branch in Hyderabad, India, offering upskilling courses of Diploma in AI and ML Healthcare program and others such as Bioinformatics, Medical coding, and Clinical SAS.

CliniLaunch is dedicated to nurturing the skills and knowledge of aspiring healthcare and pharmaceutical professionals, both graduates and undergraduates. Collaborating with prestigious institutions across India, CliniLaunch established a nationwide presence. Since its inception, the institution has been committed to unlocking the potential of life science students in the healthcare domain.

With a state-of-the-art training centre, CliniLaunch strives to elevate the standards of newcomers in the medical field, instilling quality, competence, industry knowledge, and confidence. The institute has a successful track record of placing numerous candidates into the paramedical, clinical research, and pharmaceutical industries through collaborations with top recruiters. We are at the forefront of shaping the future of healthcare professionals.



FORMAT

Online (Recorded video Lectures + Interactive Mentored Learning)



LEARNING SUPPORT

Dedicated Program Manager + Industry Mentor



TIME COMMITMENT

8-10 Hours per Week



DURATION

10 Months



PROJECTS

24 Hands-On Projects & 42 Case Studies



Our Mission and Vision

“Tell me and I forget; teach me and I may remember; involve me and I learn.”

Our coaches accepted this mantra of fruitful instructorship years ago. They are immovable in keeping themselves refreshed with each adjustment of the esplanade of clinical exploration.

Our Mission

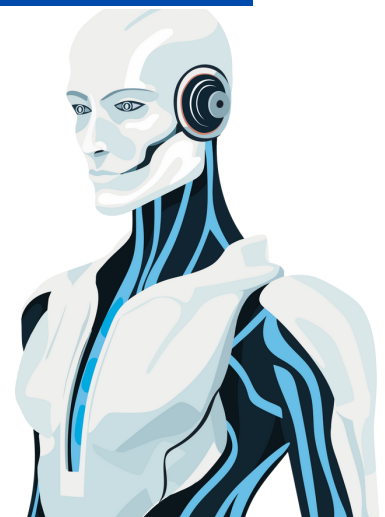
Our dedicated team is committed to bridging the knowledge gap between what students have learned and what the industry demands. (We can represent this in infographics.) Specifically, our emphasis lies in equipping students with the technical expertise necessary for careers in clinical research and related fields. Our industry-leading faculty ensures that students are well-prepared and job-ready in compliance with industry standards.

Our Vision

Our vision is to be a globally recognized institution that equips individuals with the skills needed for successful careers in emerging industries. We are committed to nurturing and empowering our dynamic group of professionals, placing a strong emphasis not just on academic knowledge but also on active learning, hands-on experience, and practical application. This holistic approach results in the development of a diverse skill set, enhanced confidence, and a collaborative mindset among our students.

Our Objective

We aim to provide high-quality, innovative approaches and methodologies for advanced learning in the fields of AI and ML in healthcare, clinical research, medical Coding, medics, paramedics, to enhance the job prospects for our students in these sectors and develop them into valuable resources for the industry and the society.



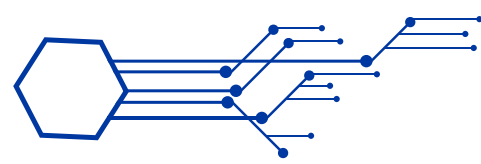
Why CliniLaunch ?

From the very beginning, our aim has been to broaden horizons and empower professionals to attain greater success in the fields of AI and ML in Healthcare. We do this by delivering high-quality training and pathways to opportunities within leading healthcare, medical and pharmaceutical sectors.

- ▶ **Core Industry Experience**
- ▶ **Communication And Soft Skills Training**
- ▶ **Customised Plans**
- ▶ **On The-Job Practical Training**
- ▶ **Cost Effectiveness**
- ▶ **Industry Expert Trainers**
- ▶ **Virtual Classrooms**
- ▶ **Creating Multi Skilled Professionals**
- ▶ **Educational Plan**
- ▶ **Lms Support™**
- ▶ **Accreditations (IAO,NSDC & LSSDC)**
- ▶ **Certifications**
- ▶ **Education Loan (0% Interest)**
- ▶ **100% Placement support**

APPLY NOW >





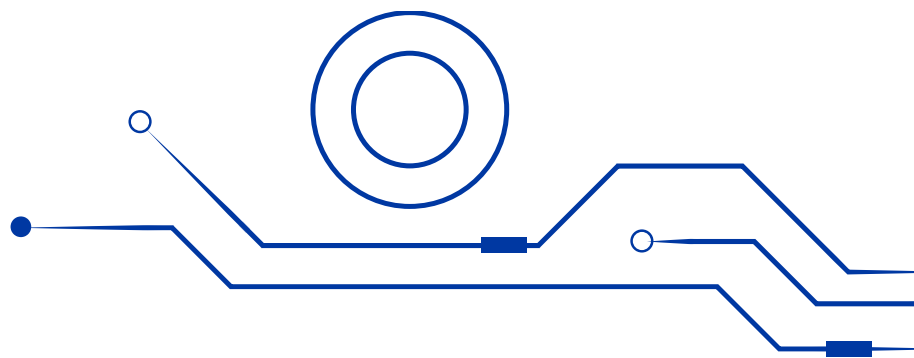
Executive PG Diploma in AI and ML Healthcare

Artificial Intelligence (AI) and Machine Learning (ML) has driven the development of healthcare with a massive transformation with revolutionary advancements. These technologies enable groundbreaking applications in various healthcare approaches from diagnosis and treatment to drug discovery and personalized medicine.

Our main objective is to equip learners with the theoretical and practical knowledge of AI and ML algorithms and the applications in the healthcare industry. If you are a healthcare professional, data scientists, researcher, and anyone interested in exploring AI and ML in Healthcare.

Course Overview

| | |
|-------------------------|---|
| Program | Executive Post Graduate Diploma in Healthcare Program |
| Course Brief | AI and ML in Healthcare programs are designed to provide a comprehensive understanding of how advanced technologies transform the healthcare sector. Participants will delve into the application of AI and ML algorithms in medical diagnosis, with personalised treatment plans, predictive analytics, and drug discovery. In the AI and ML program, we will cover fundamental concepts starting with healthcare, real-world applications & and case studies, and ethical considerations in healthcare settings. By the end of the program, participants will be equipped with the knowledge and skills needed to leverage these cutting-edge technologies to enhance patient care, and optimisation processes, and contribute to the ongoing evolution of healthcare systems. |
| Duration of the Program | 10 Months |
| Mode of the Program | Online |



Featured AL and ML in Healthcare Program

Course Curriculum for AI & ML in Healthcare

Module 1: Fundamentals of Healthcare Analytics and Data

Module 2: Statistical Analysis and Business Insights in Healthcare

Module 3: Predictive Modelling and Machine Learning in Healthcare

Module 4: Healthcare Data Visualization and Emerging Trends

Final project: Applying healthcare analytics techniques to a real-world healthcare dataset.

Presentation of projects.

Discussion on future directions and continuous learning in healthcare analytics.

Bridge Modules

Module 1: Digital Health- Introduction

Module 2: Wearable Devices and Physiological Signal Processing

Module 3: Machine Learning Basics for Real-world

Module 4: Deep Learning in Digital Health

Module 5: Deep Learning in Imaging/Vision

Foundations of Healthcare Analytics

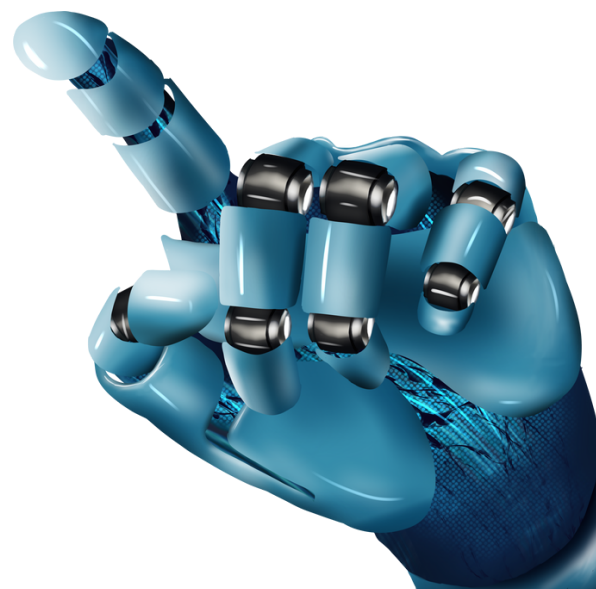
Module 1: Quantitative Methods and Statistics

Module 2: Healthcare Applications

Module 3: Communication and Leadership

Module 4: Ethical Considerations

APPLY NOW





Demand of AI, ML, Analytics in the Healthcare Industry

According to Binaricks, the global AI in the healthcare industry was valued at \$16.3 Bn in 2022 and is expected to grow at a compound annual growth rate of 40.2% to reach \$173.55 Bn by 2029. The use of AI in the healthcare market is experiencing a remarkable growth and surge in its acceptance.

Based on Analytics Vidhya, Machine learning is another area of impact where AI for healthcare is useful for disease prevention, monitoring, preventing and prediction of potential outbreaks. With the analysis of patient data, where machine learning algorithms can identify disease risk factors and help doctors intervene before symptoms appear.

Furthermore, Mordor Intelligence says that the market size of healthcare analytics is estimated at \$ 46.5 Bn in 2024. It is expected to reach \$130.49 Bn by 2029, growing at a compound annual growth rate of 22.92% during the forecast period of 2024-2029.

Healthcare Analytics jobs are projected to increase more than any other occupational group. Employment in healthcare is expected to grow at a rate of 13% from 2021 to 2031. Whether you're a data analyst interested in pivoting into healthcare, or a healthcare professional seeking a more traditional 9-5 job, becoming a healthcare data analyst could be a good fit for you.

Scope of AI, ML and Analytics in Healthcare

Healthcare leaders are finding that AI has the potential to bring transformative improvements to care by expanding access to underserved groups, advancing the causes of health equity, and reducing ethnic and racial disparities in care quality in clinical diagnostics, system operations, or community health management.

Machine learning is already being used in the healthcare industry to develop personalized treatments for patients. ML can analyze large datasets of medical records, genomic data, and other patient information to develop more accurate diagnoses and treatment plans.

The major application of data analytics in healthcare includes managing patient health records as hospitals need digital medical records for substantial cost savings and extracting data from administrative and diagnostic systems to update them in real time.



What is AI, ML and Data Analytics in Healthcare?

AI, ML, and data analytics are revolutionizing healthcare, bringing us closer to a future of personalized medicine, preventative care, and more efficient healthcare systems. Here's a breakdown of each term and how they're transforming healthcare:

Artificial Intelligence (AI) in healthcare refers to the use of intelligent machines to mimic human cognitive functions like learning, reasoning, and problem-solving. AI algorithms can analyze vast amounts of medical data, including electronic health records, medical images, and genomic data, to uncover hidden patterns and trends. This allows AI to:



Assist in diagnosis: AI can analyze medical images like X-rays and MRIs to detect diseases with higher accuracy and speed than human doctors alone.



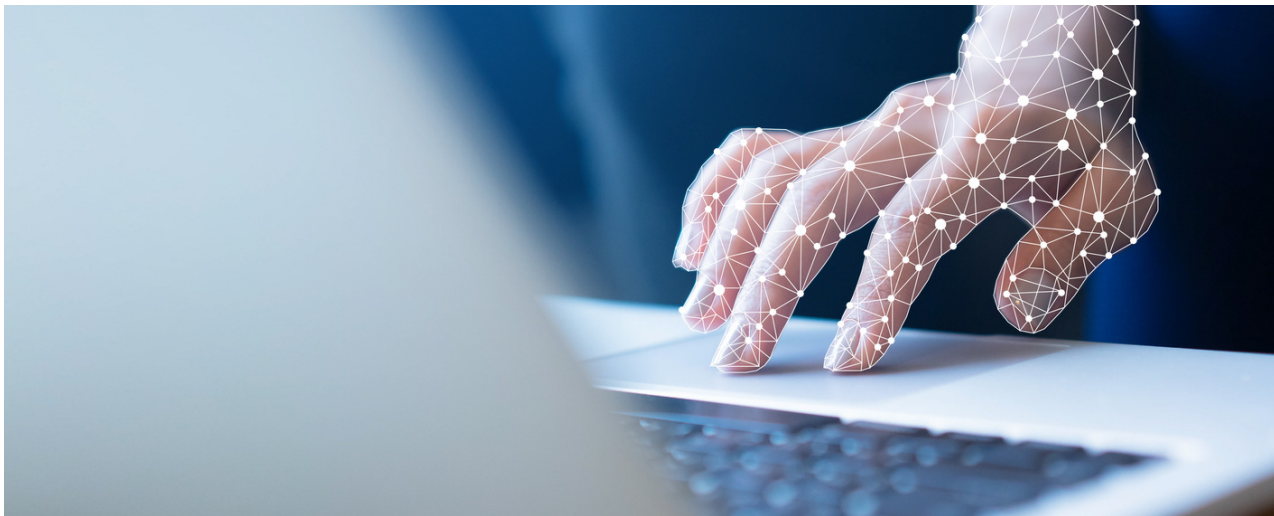
Predict patient outcomes: AI can analyze a patient's medical history and other factors to predict their risk of developing certain diseases or complications. This allows for early intervention and personalized treatment plans



Develop new drugs and treatments: AI can be used to design and test new drugs and therapies, accelerating the drug discovery process.

Machine learning (ML) is a subset of AI that focuses on algorithms that can learn and improve over time without being explicitly programmed. ML algorithms are trained on large datasets of healthcare data, and they can then be used to make predictions or classifications on new data. Some examples of how ML is used in healthcare include:





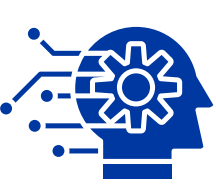
- **Personalizing treatment plans:** ML algorithms can analyze a patient's individual data to recommend the most effective treatment options for them.
- **Identifying patients at risk of readmission:** ML can be used to identify patients who are at high risk of being readmitted to the hospital after being discharged. This allows for targeted interventions to prevent readmissions.
- **Automating administrative tasks:** ML can be used to automate tasks such as scheduling appointments and claims processing, freeing up healthcare providers to spend more time with patients.

Data analytics in healthcare is the process of collecting, cleaning, and analyzing healthcare data to gain insights that can improve patient care and healthcare system efficiency. Data analytics can be used to:

- **Track disease outbreaks:** By analyzing data from hospitals and clinics, data analytics can help track the spread of infectious diseases and identify potential outbreaks.
- **Improve patient safety:** Data analytics can be used to identify patterns in medical errors and near misses, which can then be used to implement safety measures to prevent them from happening again.
- **Reduce healthcare costs:** Data analytics can be used to identify areas where healthcare spending can be optimized, such as by reducing unnecessary tests and procedures.

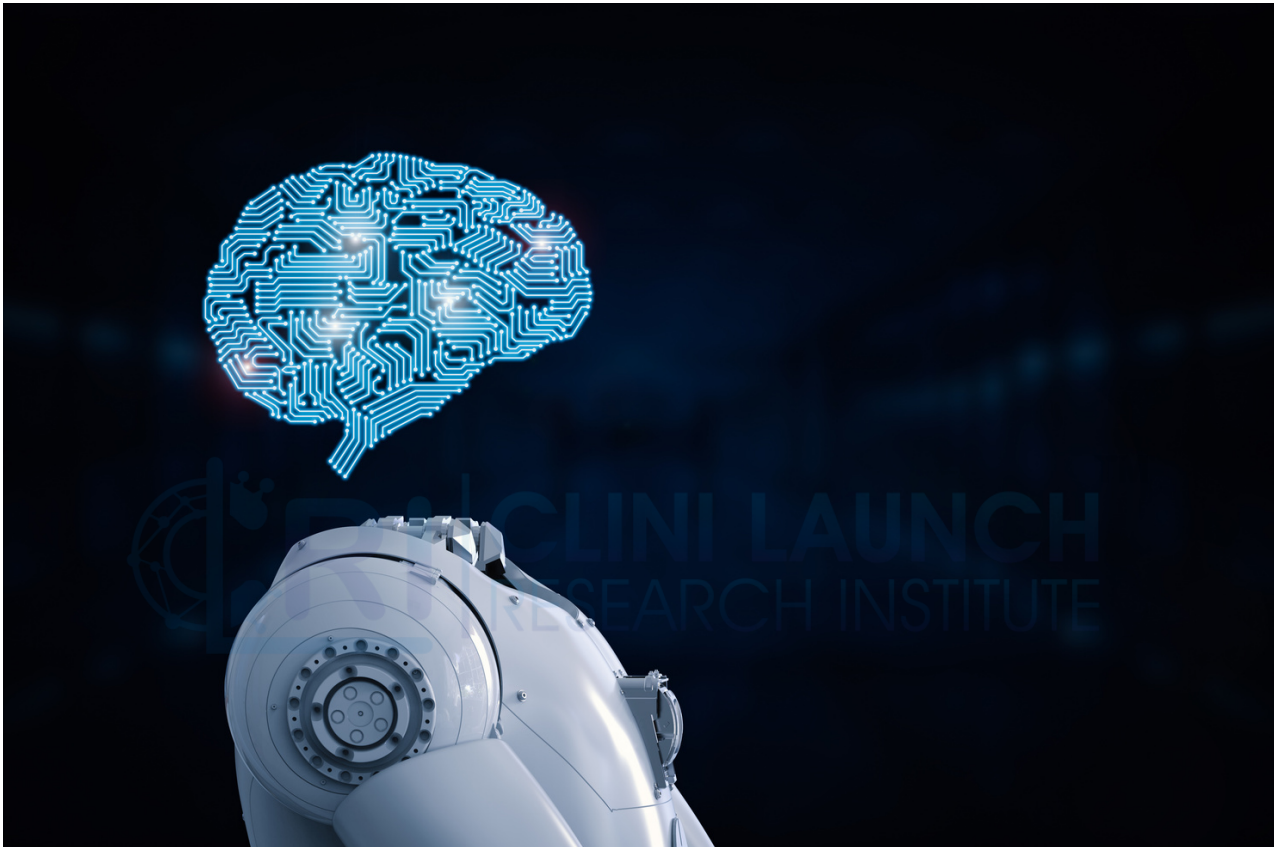
Overall, AI, ML, and data analytics are powerful tools that are transforming healthcare in many ways. These technologies have the potential to improve the quality of care, reduce costs, and make healthcare more efficient and accessible for everyone.

It is very important to note that, while these technologies offer many benefits, there are also some ethical considerations that need to be addressed. For example, ensuring that AI algorithms are not biased and patient data is protected. As AI, ML, and data analytics continue to evolve, it is very important to have a thoughtful discussion about how these technologies can be used responsibly to benefit patient and healthcare systems.



AI, ML and Data Analytics Job Roles and Responsibilities in Healthcare

The healthcare industry is embracing AI, ML, and data analytics to revolutionize patient care, research, and operations. This creates exciting job opportunities in various roles, each with its own unique responsibilities. Here's a breakdown of some key roles:



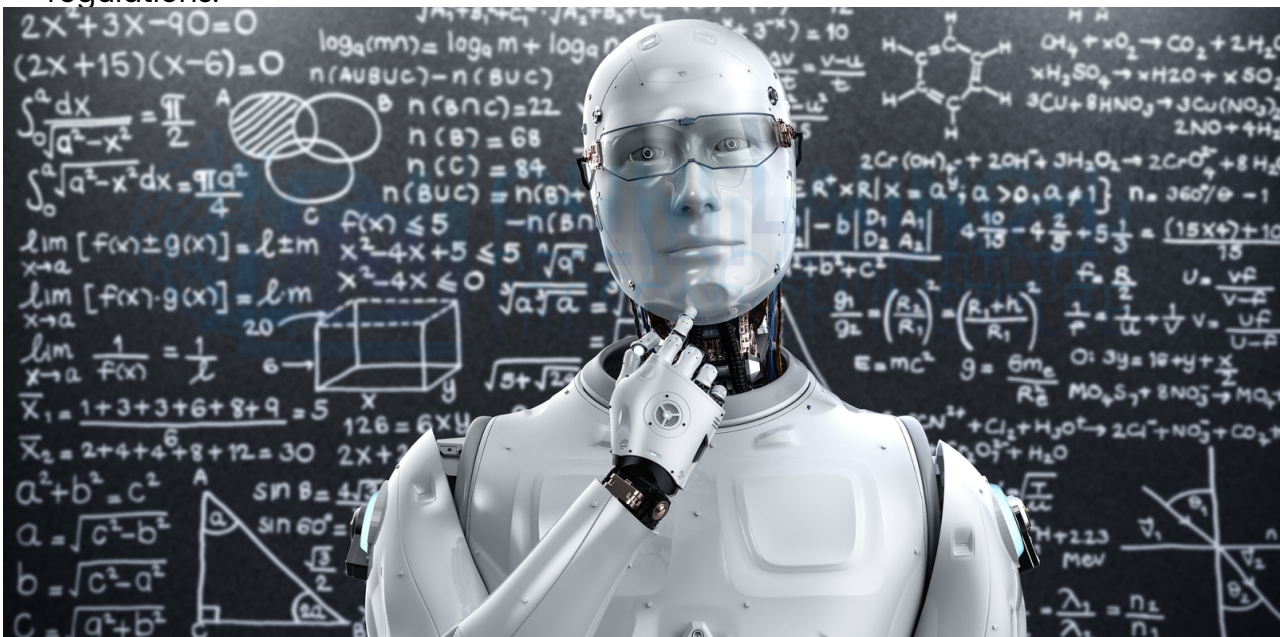
Artificial Intelligence Job Responsibilities in Healthcare

- **Healthcare AI Researcher:** Develops and applies AI algorithms to solve specific healthcare problems, like predicting disease outbreaks or personalizing treatment plans. Requires expertise in AI, healthcare domain knowledge, and research methods.
- **Clinical AI Engineer:** Builds and deploys AI models for clinical applications, ensuring compliance with regulations and data privacy. Needs strong software engineering skills, understanding of clinical workflows, and familiarity with healthcare data formats.
- **AI-powered Medical Imaging Specialist:** Analyzes medical images using AI tools to assist diagnosis and treatment planning. Requires knowledge of medical imaging techniques, AI algorithms, and clinical interpretation.



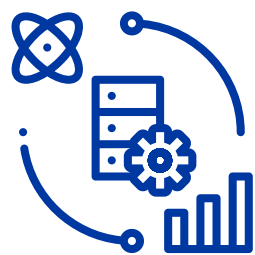
Machine Learning Job Responsibilities in Healthcare

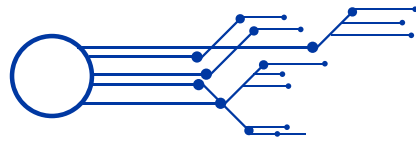
- **Healthcare ML Engineer:** Develops, trains, and deploys ML models for various healthcare tasks, like analyzing electronic health records or identifying fraudulent claims. Needs familiarity with data science, ML algorithms, and cloud computing platforms.
- **Predictive Analytics Specialist:** Utilizes ML to analyze data and predict future events, like hospital readmissions or patient deterioration. Requires strong analytical skills, understanding of statistical methods, and ability to communicate insights effectively.
- **Clinical Trial Design and Analysis Specialist:** Applies ML to optimize clinical trial design, analyze data, and generate insights for drug development and research. Needs knowledge of statistics, trial methodologies, and familiarity with relevant regulations.



Data Analytics Job Responsibilities in Healthcare

- **Healthcare Data Analyst:** Cleans, prepares, and analyzes healthcare data to identify trends, patterns, and insights for improving patient care, resource allocation, and operational efficiency. Requires strong data manipulation skills, familiarity with data visualization tools, and understanding of healthcare metrics.
- **Public Health Data Analyst:** Analyzes public health data to track disease outbreaks, monitor population health trends, and inform public health interventions. Needs expertise in epidemiology, statistics, and data visualization.



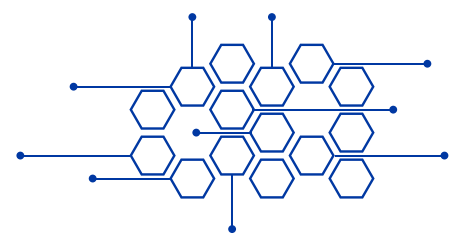


- **Public Health Data Analyst:** Analyzes public health data to track disease outbreaks, monitor population health trends, and inform public health interventions. Needs expertise in epidemiology, statistics, and data visualization.
- **Healthcare Business Analyst:** Uses data analytics to support business decisions in healthcare organizations, like market research, pricing strategies, and resource allocation. Requires strong business acumen, problem-solving skills, and familiarity with healthcare economics.

Machine Learning Job Responsibilities in Healthcare

- Strong understanding of healthcare domain and terminology
- Excellent communication and presentation skills
- Ability to work independently and as part of a team
- Data privacy and security awareness
- Continuous learning and adaptation to the rapidly evolving field

These are just a few examples, and the specific responsibilities can vary depending on the organization and role. However, it is clear that AI, ML, and data analytics offer a wealth of opportunities for individuals with the right skills and passion to make a significant impact in healthcare.



AI, ML and Data Analytics Job Roles and Responsibilities in Healthcare

The healthcare industry is embracing AI, ML, and data analytics to revolutionize patient care, research, and operations. This creates exciting job opportunities in various roles, each with its own unique responsibilities. Here's a breakdown of some key roles:

Diagnostic AI: Analyzes medical images, patient data, and genomics to assist in diagnosis, detect diseases early, and predict patient outcomes. This includes applications like:

- **Medical image analysis:** AI models can interpret X-rays, CT scans, and MRIs to detect abnormalities and support diagnoses of cancer, stroke, and other diseases.
- **Dermatology AI:** AI can analyze skin lesions to identify skin cancers with high accuracy.
- **Personalized medicine:** AI can analyze a patient's genetic and clinical data to predict their risk for certain diseases and personalize treatment plans.



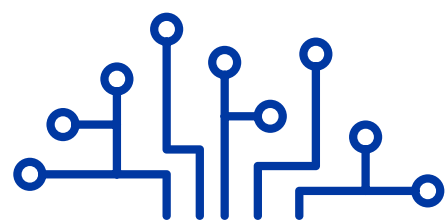
Clinical AI: Assists healthcare professionals with clinical tasks and decision-making, enhancing efficiency and patient care. Some examples include:

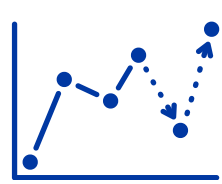
- **Virtual assistants:** AI-powered chatbots can answer patient questions, schedule appointments, and provide basic medical information.
- **Robotic surgery:** AI-assisted robots can perform minimally invasive surgeries with greater precision and control.
- **Medication management:** AI can analyze patient data to recommend optimal medication dosages and identify potential drug interactions.



Administrative AI: Assists healthcare professionals with clinical tasks and decision-making, enhancing efficiency and patient care. Some examples include:

- **Claims processing:** AI can automate the review and processing of insurance claims, reducing errors and streamlining the process.
- **Revenue cycle management:** AI can identify billing errors and optimize revenue collection for healthcare providers.
- **Appointment scheduling:** AI-powered systems can dynamically schedule appointments based on patient availability and provider schedules, reducing wait times.



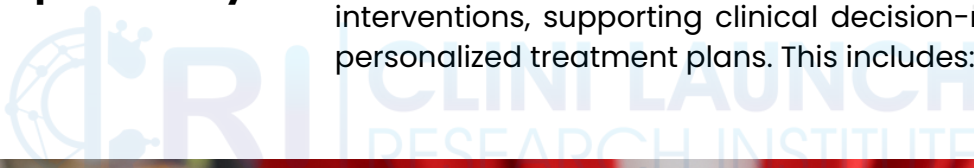


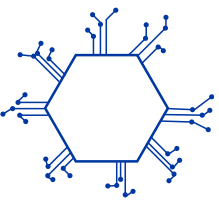
Types of Machine Learning in Healthcare

Predictive analytics: Analyzes large datasets to predict future events and trends, enabling proactive interventions and improved resource allocation. Some examples include:

- **Hospital readmission prediction:** ML models can predict which patients are at risk of being readmitted after hospital discharge, allowing for preventive measures.
- **Outbreak prediction:** ML can analyze data from various sources to predict the spread of infectious diseases and prepare public health responses.
- **Patient flow optimization:** ML can analyze hospital data to optimize patient flow, reduce wait times, and improve resource utilization.

Prescriptive analytics: Analyzes data to recommend optimal actions and interventions, supporting clinical decision-making and personalized treatment plans. This includes:





- **Treatment recommendation:** ML models can analyze patient data and suggest the most effective treatment options based on individual characteristics and response probabilities.
- **Dosage optimization:** ML can personalize medication dosages for individual patients based on their genetic makeup and other factors.
- **Risk assessment:** ML can predict a patient's risk for developing certain diseases or complications, allowing for preventive measures and early intervention.



Types of Data Analytics in Healthcare

Diagnostic analytics: Investigates specific issues or trends identified in descriptive analytics to understand the underlying causes. This includes:

- **Root cause analysis:** Identifying the factors contributing to a specific problem, such as high readmission rates or medication errors.
- **Data mining:** Exploring large datasets to uncover hidden patterns and relationships that might explain trends or anomalies.
- **Statistical modelling:** Developing statistical models to analyze relationships between variables and predict future outcomes.

These are just a few examples, and the specific types of AI, ML, and data analytics used in healthcare are constantly evolving. As the field advances, we can expect even more innovative applications that will revolutionize patient care, research, and the entire healthcare ecosystem.

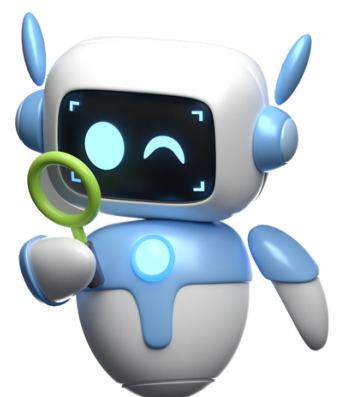
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AI, ML, and Data Analytics in Healthcare Salary and Job Outlook in India

The Healthcare sector in India is rapidly growing. While adopting artificial intelligence, machine learning, and data analytics in creative exciting opportunities for professionals with the right skills, here is the salary breakdown and job outlook for these fields given below.



Considering the salary range on the basis of entry level, mid-level and senior-level positions, the breakdown of salary is typically compared in the three roles: Data Analyst, ML Engineer, and AI Engineer/Researcher.



Salary of Data Analyst, ML Engineer, and AI Engineer/Researcher

Entry Level (Fresher)

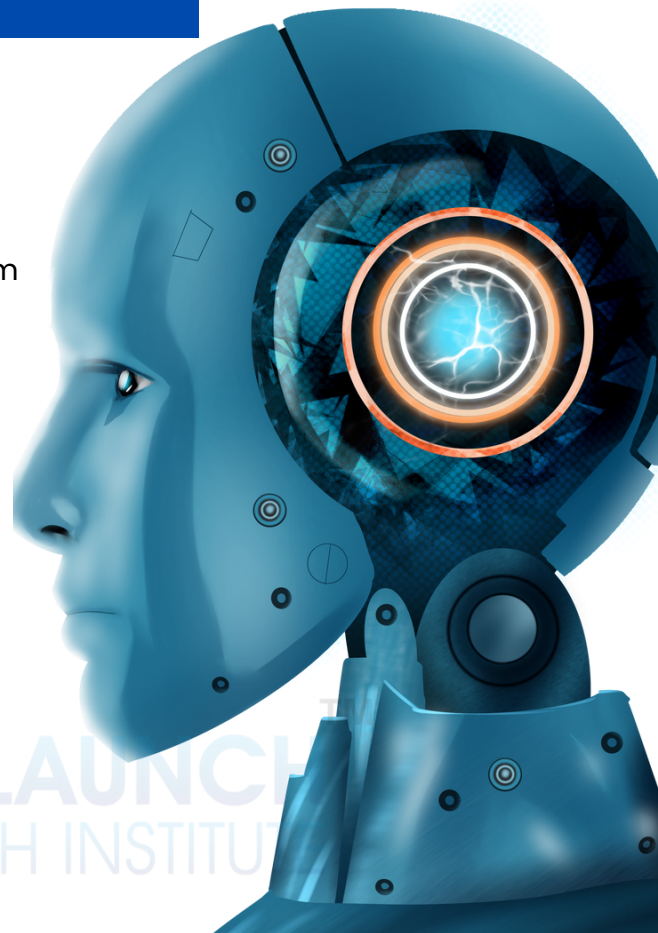
- Data Analyst: ₹3.4 - 4.2 lakhs per annum
- ML Engineer: ₹4 - 5 lakhs per annum
- AI Engineer/Researcher: ₹4.5 - 5.5 lakhs per annum

Mid-level (1-4 years experience)

- Data Analyst: ₹4.2 - 6.5 lakhs per annum
- ML Engineer: ₹5 - 7 lakhs per annum
- AI Engineer/Researcher: ₹6 - 8 lakhs per annum

Senior-level (5+ years experience)

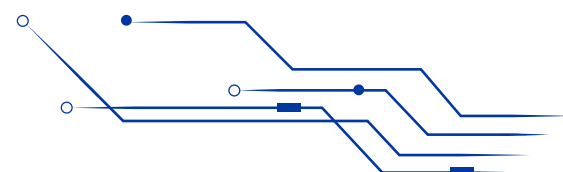
- Data Analyst: ₹6.5 - 20 lakhs per annum
- ML Engineer: ₹7 - 12 lakhs per annum
- AI Engineer/Researcher: ₹8 - 15 lakhs per annum

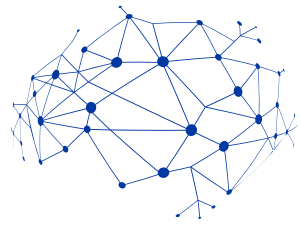


Salary of Data Analyst, ML Engineer, and AI Engineer/Researcher

All the three fields are experiencing high demand and rapid growth exceeding the supply of qualified candidates and professionals. The main factor is an increase in government initiatives in healthcare IT with a rising adoption of AI-powered tools, and growing focus on driven-driven decision-making. Skill gap due to limited availability of trained professionals and the rapidly evolving nature of the field.

Additional factors that affect salary and job outlook is that major cities such as Bangalore, Mumbai, Delhi, and Hyderabad offer high salaries and more job opportunities. Specific skill is also a factor which includes expertise in niche areas such as medical imaging analysis, clinical trial design, or drug discovery can command higher salaries. The third additional factor is experience and qualification where advanced degrees are required with relevant certifications, and strong domain knowledge that add to the earning potential.





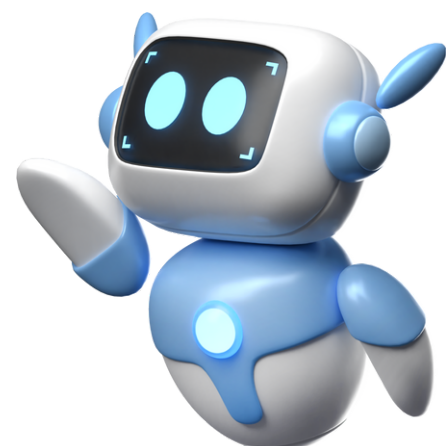
Remember, these are just estimates, and actual salaries and job prospects may vary depending on individual circumstances and market conditions. However, it is very clear that AI, ML, and data analytics offer promising career paths in the Indian healthcare industry with significant earning potential and job security.

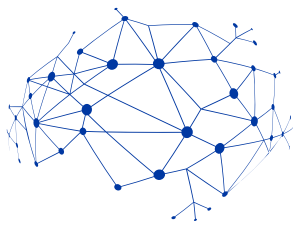
Skills Needed to be a AI, ML and Data analytics professional in healthcare

To thrive in AI, ML, and data analytics for healthcare, you need both technical prowess and healthcare understanding. Master Python and data science essentials like Pandas and Scikit-learn. Learn ML algorithms, statistics, and cloud platforms like AWS. But don't neglect the domain side – understand medical terminology, processes, and regulations. Hone your communication, critical thinking, and teamwork skills to collaborate effectively. Continuously learn new technologies and trends to stay ahead in this dynamic field.



Remember, specific skills vary based on your chosen specialization within healthcare AI, ML, or data analytics. Do your research and tailor your skills development accordingly to land your dream healthcare tech role.



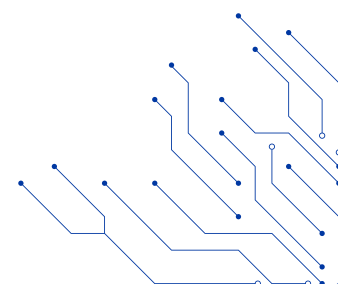


How to Become an AI, ML or Analytics Professional in Healthcare

So, are you ready to join the healthcare revolution powered by AI, ML and data? Buckle up, because the journey promises both challenges and immense reward. Here's your roadmap:



- Build your technical skills such as programming, data science, machine learning, statistics and probability, cloud computing, and more.
- Immerse yourself in healthcare such as being domain savvy, understand AI/ML application in healthcare and network with insiders.
- Hone your soft skills such as communication, teamwork, critical thinking, and lifelong learning.
- Choose your path. Choose the specific area of your interest such as data analyst, ML engineer, AI researcher, or Clinical AI specialist.
- Take action such as formal education with CliniLaunch Research Institute's EPGD in AI & ML Healthcare program. Gain targeted skills in your specialized area of interest.





Remember, specific skills vary based on your chosen specialization within healthcare AI, ML, or data analytics. Do your research and tailor your skills development accordingly to land your dream healthcare tech role.



Data-driven healthcare Analytics with CliniLaunch

If you're considering becoming an AI, ML or data analyst in healthcare, you might be interested in CliniLaunch's AI and ML healthcare program. The 480+ hours program will help you achieve your specific, role-based career goals by using case scenarios.



Resources for Finding Jobs:

- Job Boards: Indeed, LinkedIn, Glassdoor, Monster, Healthcare IT Jobs
- Professional Associations: American Health Information Management Association (AHIMA), Healthcare Information and Management Systems Society (HIMSS)
- Company Websites: Many healthcare organisations and technology companies list their open positions on their websites.



Accredited & Certified Institution



सरकार पंजीकृत



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Thank You



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