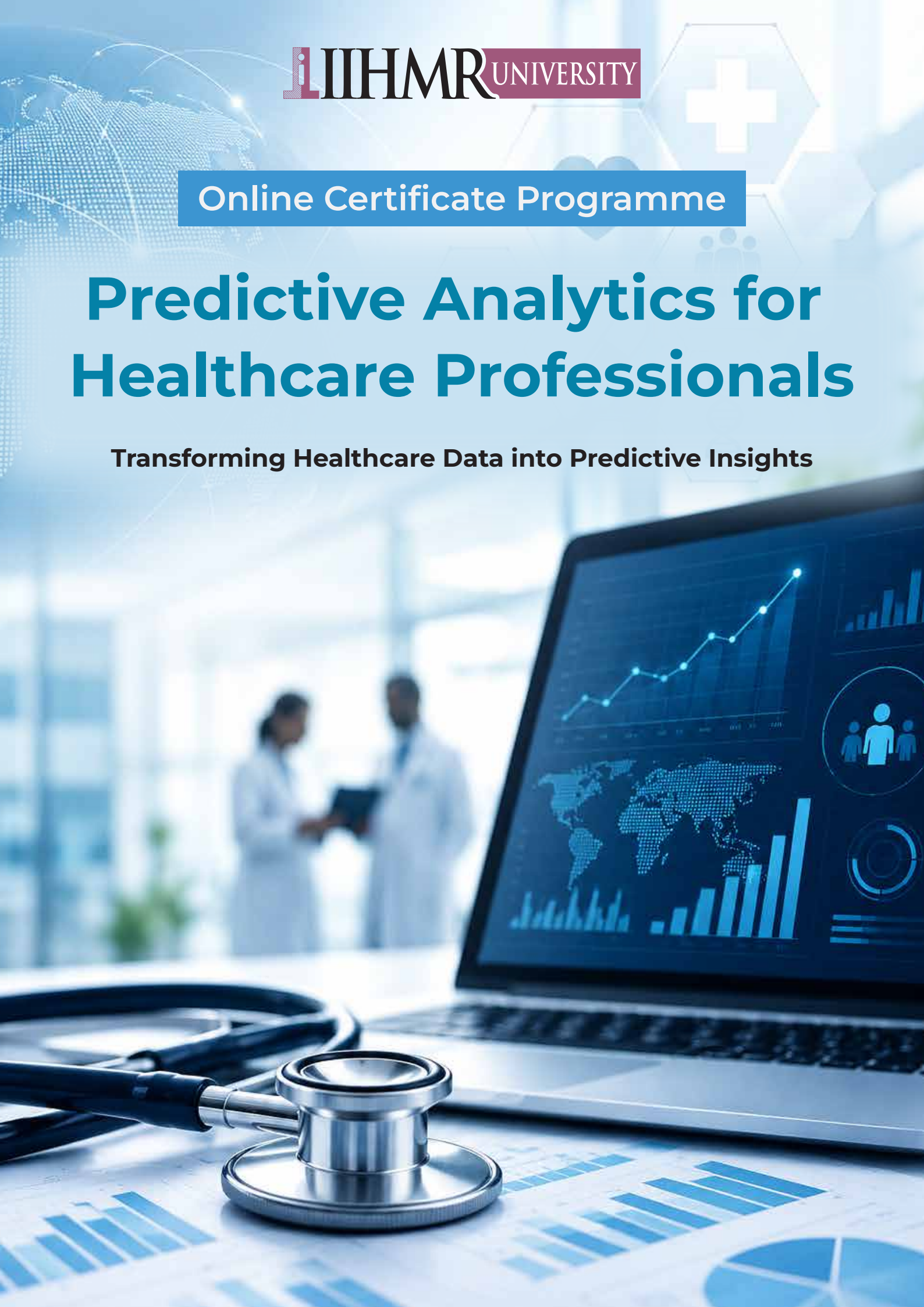
IIHMR UNIVERSITY

Online Certificate Programme

Predictive Analytics for Healthcare Professionals

Transforming Healthcare Data into Predictive Insights



Background

Healthcare organizations generate vast amounts of data through electronic health records, health information systems, wearables, claims, and public health databases. Predictive analytics enables healthcare professionals to move beyond descriptive reporting and use data to anticipate patient risks, forecast demand, improve resource utilization, and support evidence-based decisions.

This programme provides a practical, no-code approach to predictive analytics using Orange Data Mining, enabling healthcare professionals to develop and interpret predictive models without prior programming or machine learning experience.



Objectives

The programme aims to:

- Understand healthcare analytics and the principles of predictive modelling.
- Prepare, explore, and visualize healthcare datasets using no-code analytical tools.
- Develop and compare predictive models for clinical, operational, and public health applications.
- Evaluate and interpret model performance to generate meaningful healthcare insights.
- Apply predictive analytics to real-world healthcare challenges and support evidence-based decision-making.

Course Contents

- Analytics concepts, healthcare applications, Orange interface and workflow development.
- Data quality, cleaning, feature selection, transformation, EDA and visualization.
- Disease prediction, classification models, validation and performance metrics.
- Prediction of healthcare outcomes such as length of stay, cost and recovery time.
- Patient segmentation, disease associations, feature selection and identification of unusual records.
- End-to-end predictive analytics workflows, case studies and workplace-based project.

Pedagogy

The programme follows an experiential and competency-based learning approach, combining conceptual understanding with extensive practical application. Participants will learn through interactive faculty sessions, live software demonstrations, guided practice, healthcare case studies, collaborative activities, and workplace-oriented assignments. Hands-on exercises using Orange Data Mining and healthcare datasets enable participants to develop predictive analytics skills without programming. The learning experience combines instructor-led sessions with guided tutorials, independent practice, and a capstone project.

Programme Duration

Duration: 3 Months (12 Weeks)

Learning Hours:

- 24 Hours Online Instructor-led Sessions
- 24 Hours Guided Self-learning

Credits: 3 Credits

Mode: Live Online (Faculty-led sessions with hands-on practical learning)



Programme Highlights

- learn predictive analytics through an intuitive visual workflow environment.
- Hands-on experience with Orange Data Mining and healthcare datasets.
- Build and compare classification and regression models for healthcare applications.
- Apply clustering, association rules, feature selection and anomaly detection.
- Develop skills to evaluate, interpret and communicate predictive insights for healthcare decision-making.
- Complete a workplace-oriented capstone project addressing a real healthcare challenge.

Who Should Attend?

This programme is ideal for:

- Hospital Administrators & Medical Superintendents
- Doctors, Clinicians & Clinical Leaders
- Healthcare IT & Digital Transformation Professionals
- Healthcare Managers, Quality & Operations Professionals
- Public Health Professionals, Researchers & Faculty Members
- Healthcare Management & Allied Health Professionals seeking practical analytics skills

Eligibility

Applicants should possess a Bachelor's degree in Medicine, Dentistry, Nursing, Pharmacy, Allied Health Sciences, Public Health, Life Sciences, Hospital Administration, Health Informatics, Healthcare Management, or related disciplines.
Basic computer literacy is required. Familiarity with Microsoft Excel is desirable but not mandatory. No prior programming knowledge is required.

Registration

For programme schedule, fee details, and registration, please contact:

Office of Online Certificate Programmes (OCP)
IIHMR University
1, Prabhu Dayal Marg, Sanganer Airport
Jaipur – 302029, Rajasthan, India
Mobile: +91 9116006536 | Tel: +91-141-392470
Email: Onlinecertificate@iihmr.edu.in

Assessment

Participants will be evaluated through:

- Weekly Practical Assignments
- Healthcare Case Study
- Mid-Term Practical Assessment
- Capstone Project

Assessment is designed to evaluate practical software competency, application of predictive analytics concepts, and workplace application.

Programme fee

The programme fee for Indian participants is Rs. 30,000 plus GST (18% as applicable), and for international participants it is USD 315 plus GST (18% as applicable).

Discounts on Fee

- **Early Bird Discount:** Nominations received with payment before four weeks of the commencement of the programme will be entitled to a 10% early bird discount.
- **Group Discount:** Any organization sponsoring four or more participants to the programme will be entitled to a 20% discount on the total fee payable, provided that at least four participants attend the programme.
- **Maximum Discount:** Organizations can avail themselves of both discounts, subject to a maximum discount of 20%.

Certificate

Participants successfully completing the programme and fulfilling the attendance and assessment requirements will receive a Certificate of Completion from IIHMR University, Jaipur.

Programme Coordinator



Dr. Ritu Vashistha
Assistant Professor
IIHMR University, Jaipur



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