




International Certificate Program in Data Science

Become Data Savvy | Be Indispensable To Your Organization |
Up Your Game At Work

School Of Data Science

A person is working at a desk. On the left, a laptop is open, displaying a blurred screen. In the center, a hand holds a pen over a document. To the right, another hand is visible, also holding a pen. The desk is covered with various papers, including one with a colorful pie chart. The entire scene is overlaid with a semi-transparent red filter.

Learning data science is perhaps the
best **investment** you can make
in your **career**.

Message from the Institute

Data science is the fuel of every modern organization. The role of leaders and managers will be highly influenced by everything that data has to offer. The ability to translate data problems into business outcomes and contextualizing it to the organization is critical for the organization and its success. Individuals with domain knowledge, equipped with Data Science skills command a premium of upto 40% over those who don't have such skills. Leading companies like Google, Facebook, Netflix, Pandora and Amazon have data and smarts built into their DNA and that is the source of their competitive advantage. The ubiquity of data has made it possible for all types of organizations to take advantage of abundant data they capture through sensors, webpages, transactions, social media and the like. However, the data advantage is not possible without the people with the skills to help mine the diamonds out of the data quarry. It's time for professionals to reskill or perish.

The International Certificate Program in Data Science (ICDS) is a 6 month modular program in applied data science, designed by experts at the School of Data Science of Institute of Product Leadership, in collaboration with the Industry council comprised of global leaders in data science. The program leverages 6 face to face immersions and 36 online live sessions, along with hands-on projects, guided by faculty mentors to ensure the holistic learning of the participants.

The ICDS program is an experiential program that will help working professionals get a grasp of the practical aspects of data science. It is designed to ensure that working professionals are able to understand the nuances of data science in an experiential and practical learning environment, using proven "learning by doing" pedagogy at the the institute, while they are doing their day jobs.

Welcome to the School of Data Science!

Director,
School of Data Science
Marya Wani, Ph.D.

**“ Creating the next gen
data smart professionals ”**



Why choose the ICDS Program?

The ICDS Advantage

The ICDS program helps working professionals understand the practical aspects of Data Science and data driven decision making. The program equips you to upskill yourself and take your organization to new heights using a data driven approach to its performance management.

Career Advantage

Senior management in global organizations are encouraging their existing workforce to gain data literacy and drive data driven culture in their organizations. Data Science is an indispensable skill that professionals will have to master should they survive the competition in the job market of today. Products, services, decisions and organizations are all heavily dependent on data and will continue to do so at scale. Learning Data Science is a career investment that every professional should make to stay in the most valued employee list.

Focus on Applied Data Science

This program is designed with a very specific focus on application of data science in business and decision making. It will help you contextualize a data driven approach to your organization. It will enhance your ability to work with and assemble data science teams. You will be able to make meaningful conversations with the nerdy data scientists and also be fully equipped to hire a data science team.

Program Delivery

The program faculty are experts from the industry who help you understand the practical aspects of data science and its application in business. Our faculty are veterans in the field with decades of experience and proven expertise in their area of specialization.



Pedagogy And Curriculum

The program curriculum is developed by expert designers in collaboration with our industry council to create a unique blend of courses that address the data science needs of the industry.

Our proven experiential learning pedagogy has been endorsed by the industry and our past senior executive students alike. The institute takes pride in its unique pedagogical interventions that are specially designed for the learning needs of working professionals.

**“ Building the workforce
of the future ”**

Hands on Learning Experience

Applied Data Science Curriculum

Learn and apply industry relevant data science methods. This course is focused on equipping you with the practical aspects of data science, with deep dive contextualized case studies that will help you understand and work with practical aspects of data science.

Continuous Coaching and Mentoring

While course modules are delivered in classroom, our coaches and mentors are available for continuous guidance for the students should they need any help.

Experiential Learning and Skill Labs

As part of the Skill Labs participants get hands on experience in solving real challenges and building solutions to real problems. Every participant works on projects that are part of course evaluation, supported by mentors and coaches. Each of these projects are a showcase for your data science skills which are critical for your career acceleration.

Learn from those who understand industry and pedagogy.
It gives **experiential learning** a whole new meaning.



Faculty

Our faculty are experts and industry professionals with deep knowledge of data science and its application in the real world. They are expert facilitators who understand pedagogy and curriculum as well as the industry practices.



Dr. Marya Wani
Program Director,
School of Data Science



Prof. Mukesh Rao
Sr. Faculty and
Data Science Practitioner



Prof. Manohar Rao
Sr. Faculty,
Advanced Analytics



Prof. Pinkesh Shah
Director of Programs and
Sr. Faculty,
Institute of Product Leadership



Prof. Rishiraj Dasgupta
Sr. Faculty,
Statistics and Data Analysis



Prof. Rahul Abhyankar
Director of Programs and
Sr. Faculty,
Institute of Product Leadership

Learn one skill every month

S	M	T	W	T	F	S
31		2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



ONLINE LIVE CLASS - FACULTY

FACE TO FACE IMMERSION - FACULTY

MODULE 1: (Month 1) Bangalore
Statistical Foundations for Data Science
 6 Virtual live sessions
 9 Face to Face immersive sessions

MODULE 2: (Month 2) Bangalore
Programming Essentials for Data Science
 6 Virtual live sessions
 9 Face to Face immersive sessions

MODULE 3: (Month 3) Bangalore
Machine Learning and AI
 6 Virtual live sessions
 9 Face to Face immersive sessions

MODULE 4: (Month 4) Bangalore
Modeling and Optimization
 6 Virtual live sessions
 9 Face to Face immersive sessions

MODULE 5: (Month 5) Bangalore
Data Science Engineering Essentials
 6 Virtual live sessions
 9 Face to Face immersive sessions

MODULE 6: (Month 6) Bangalore
Visualization and Data Consulting
 6 Virtual live sessions
 9 Face to Face immersive sessions

-includes a Data Science Capstone



This is a 6 month immersive program with both online live and face to face immersions. All courses are delivered on alternate weekends with coaching sessions on weekday evenings.

Designed specially for building your applied data science skills, the program content is based on industry challenges and underlying principles of data science. The program also gives you a holistic understanding of the immensely vast field of data science that is a multidisciplinary conglomerate of various fields of science, mathematics, business, and technology. Guided by expert faculty you will be able to become data savvy and usher in a data driven culture in your organization, realising the ROI on your data investment.

Curriculum



Statistical Foundations for Data Science

Statistics and mathematics lie at the heart of data science. They form the building blocks of finding insights from data. These courses will help build your foundation in statistics and mathematics that will go a long way in making you an expert in the field of data science. These fundamental concepts including linear algebra, probability and statistics are essential for data science professionals.



Programming Essentials for Data Science: R, Python, SQL

Programming languages like R, Python, SQL and others enable data science professionals to analyze, wrangle and visualize data. These are essential tool kits for any data science professional.



Machine Learning Algorithms and AI

Algorithms help with the analyses of data and are used to derive meaning from data. Random forest, clustering, regression analysis, decision trees, principal component analysis (PCA), time series analysis are some popular algorithms in data science. This course focuses on implementation of machine learning, unsupervised learning using popular program languages and predictive modeling.



Data Modeling and Optimization

Modeling and simulation are essential in handling the complexity of some systems. The course provides you with the essentials of model development and simulation techniques.



Data Engineering Essentials

The world is moving towards better data management as disk spaces are increasingly finding it difficult to capture and maintain the ocean of data that are generated over the web, sensors, transactions etc. This course provides an understanding of data engineering and implementation. It introduces participants to the key concepts and techniques underlying the design and engineering of distributed computing systems that enable modeling databases of events for optimal storage, accessibility, extraction, transferring and loading data into storage databases.



Visualization and Data Consulting

The course focuses on design and presentation of data using principles of design thinking, visualization and graphic design. Communication of data results and insight, is highly valued skill in data science. It enables non-data scientists to consume and operationalize data. For these users and others, understanding what the data is saying is critical before they start acting on it. Data consulting is an advanced skill that helps data science professionals to build their brand by communicating data with power and consulting organizations on how strategic use of data can be made.



Data Science Capstone

The world is moving towards better data management as disk spaces are increasingly finding it difficult to capture and maintain the ocean of data that are generated over the web, sensors, transactions etc. This course provides a comprehensive understanding of data management systems and implementation.



The Curriculum's Actionable Outcomes:

1. Programming Basics
2. Data Analysis
3. Data Modeling
4. Data Wrangling
5. Data Management
6. Insight Mining
7. Data Driven Decision Making
8. Visualization and Storytelling
9. Business Acumen

While the focus is on building data science skills, we also focus on your business acumen to ensure you are able to evangelize a data driven culture in the organization and stand out as a professional, making you an easy choice for hiring managers.

“ Build your data science career through an educational experience which is relevant, industry focused and relevant. Take charge and build a career you love! ”

Eligibility

Ideal Candidates



Professionals with
High Learnability Skills



Engineers/
Architects



Mid-Senior
Working Professionals



Decision Makers/
Managers

Eligibility

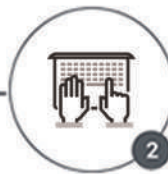
- A Bachelor's Degree with minimum 50% score
- 5+ years of work experience

Admission Process

Admissions are done via the 3-step process outlined below.



Fill the online
application form



Appear for the online
Data Science Aptitude Test



Upon qualifying the Data Science
Aptitude test, you will be screened by the
admission panel via personal interview

Build your data science competency
that is **relevant to the industry!**

School of Data Science

INSTITUTE OF PRODUCT LEADERSHIP

<https://www.productleadership.com/programs/data-science-certification/>

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