Professional Executive and Development Programme in

Data Science
for Social Impact

Designed For
Working Professionals

Programme Prospectus

2025

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A pioneering data science programme with **interdisciplinary** subject-matter expertise in **climate** and **health**.
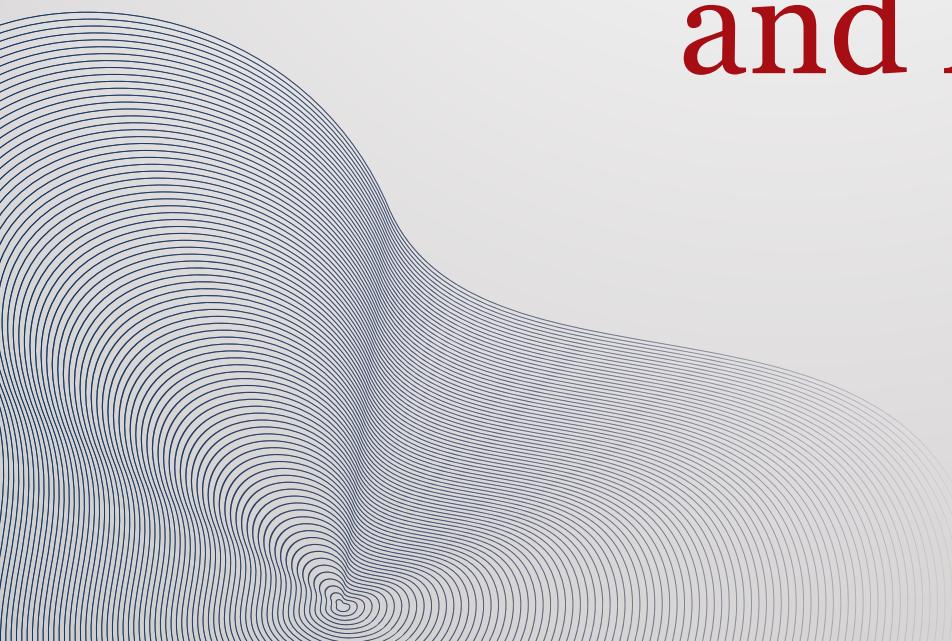
Context

In India, climate change will pose significant public health challenges in the coming decades. The World Health Organization (WHO) has identified climate change as the **'single biggest health threat facing humanity'**. Between 2030 and 2050, climate change is expected to cause around 2,50,000 additional deaths per year from undernutrition, malaria, diarrhoea, and heat stress alone. Thus, there is **an urgent need to train professionals** with the skills to tackle these problems.

Leveraging data is critical for managing risks and developing robust public health infrastructure. However, there remains a scarcity of accessible academic courses, training, or leadership development programmes tailored to equip these professionals.

The Programme

It addresses the above gap and train a cohort of data professionals with interdisciplinary subject-matter expertise in climate and health data, with a key focus on Inclusion, Diversity, Equity, and Accessibility (IDEA).

The programme offers two tracks -
1. **Data Science and Analytics for Social Impact**
2. **Data Science for Social Impact Management**.

- Learners will be awarded a **Certificate in Data Science for Social Impact** with their track mentioned along with the grade

Partner Organisation

This programme was developed by Ashoka University as one of the founding members of data.org's India Data Capacity Accelerator (IDCA) —an initiative to advance data-driven solutions for social impact.

A strong focus on **real-life datasets** and **application** of learnings for solution.
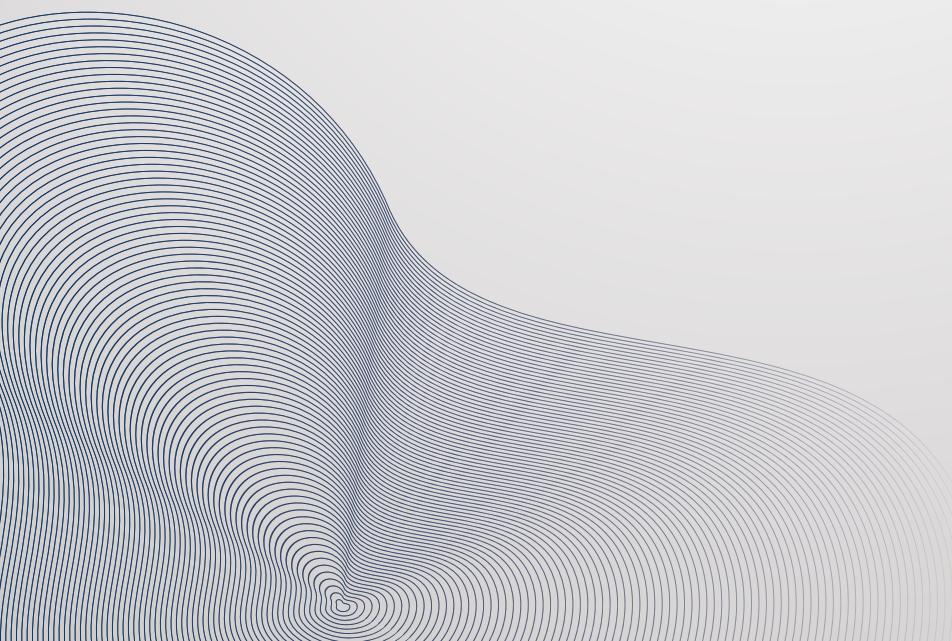
Programme Structure

The programme will take place over **20 weeks from September to April**, starting on **13ᵗʰ September 2025**.

It will consist of **lectures, tutorials, a discussion forum, assignments, quizzes and project presentations**, all conducted entirely online.

4 weeks of **Foundation Course** in pre-requisite concepts of **math**, **statistics** and **coding**.

Supportive LMS to enable flexible access to course materials, lecture videos, and other study resources.

Two-track programme for differing goals- **'Data Science and Analytics for Social Impact'** and **'Data Science for Social Impact Management'**.

Experiential learning based assignments, individual and group projects, online proctored **midterm**, and **end-term exam**.

Timings

20-week live online programme with **7.5 contact hours per week**. Additional self-study hours as required.

2-hour online lectures by Faculty on **Wednesday evenings** and **Saturday mornings**. Office hour slots will also be available with faculty or learning coordinators.

3.5 hour online tutorial, guest, or discussion sessions on **Saturday afternoons**.

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Course Structure and Curriculum

The programme will be divided into two segments:

1 It will introduce data driven problem solving in social impact areas to identify and train in techniques and tools for data collection, curation, collation, clustering, classification, visualisation, and analysis of data.

2 This will focus on specialising in the applications of the insights gained in the first segment with case studies and hands-on projects in the climate and health sectors.

Course List

Course #	Course Title	Duration
Course 1	Problem Solving with Data	1 week
Course 2	Data Analysis with Spreadsheets	2 weeks
Course 3	Working with Text Data	1 week
Course 4	Participatory Data Science	1 week
Course 5	Geospatial & Time-Series Analytics	3 weeks
Course 6	Data Visualization & Interpretation	2 weeks
Course 7	Data Analysis with Machine Learning	2 weeks
Course 8	Data Science in Climate Change	3 weeks
Course 9	Data Science in Healthcare	4 weeks
Course 10	Delivering Social Impact Projects	1 week

20 weeks

Learning Tracks

We recognize the differing needs among social sector practitioners for data science:
a) Proficiency as a data scientist and coding programmes, or
b) Awareness of data science tools and techniques to interpret and make informed decisions

Keeping this in mind, we offer two tracks for the learners:

Track 1

Data Science and Analytics for Social Impact

Focus: Learn to apply data science tools and techniques, including modelling, analysis, and visualization, to solve social impact problems

Who is it for?
Data practitioners, analysts and aspiring data scientists

Track 2

Data Science for Social Impact Management

Focus: Understand data science principles and practices to effectively manage data-driven social impact projects

Who is it for?
Generalists, programme managers and other non-technical roles that need an understanding of data science

Key points to note

1. Foundational Courses are common to both tracks and include topics essential in data science, visualizations and geospatial analysis.

2. The experiential learning in the programme will be tailored based on the track, with the nature of assignments and projects catering to the needs of the track chosen.

3. Certificates will be awarded based on the chosen track.

4. Applicants should indicate their preferred track on the application form but can change it until Course 7 begins.

Faculty and Advisors

Core Programme and Sector Leads

Partha Pratim Das
Professor of Computer Science and Founding Director of Centre for Data Science and Analytics at Ashoka University and former Professor of Computer Science and Engineering at IIT Kharagpur
PEDP Role: Faculty and Program Director

Maya Ramanath
Visiting Professor of Computer Science at Ashoka University, Program Director of Centre for Data Science and Analytics at Ashoka University and Associate Professor of Computer Science and Engineering at IIT Delhi
PEDP Role: Faculty and Program Lead

Gautam Menon
Dean, Research, Professor of Physics and Biology and Director of Climate Change and Sustainability (3CS) at Ashoka University
*PEDP Role: Sector Lead of Climate Sciences*

Anurag Agrawal
Dean of BioSciences and Health Research at the Trivedi School of Biosciences at Ashoka University
PEDP Role: Sector Lead of Health Sciences

Faculty and Advisors

Subhashis Banerjee
Head of the Department & Professor of Computer Science, Ashoka University
PEDP Role: Advisor for Data Science Practices

Lipika Dey
Professor of Computer Science at Ashoka University
PEDP Role: Faculty

Meghna Agarwala
Assistant Professor of Environmental Studies at Ashoka University
PEDP Role: Faculty

Faculty and Advisors (contd.)

Venkatesh Rajamanickam
Professor of Industrial Design Centre at IIT Bombay

PEDP Role: Faculty

Ramachandran Thiruvengadam
Assistant Professor (Biochemistry), Pondicherry Institute of Medical Sciences

PEDP Role: Faculty

Sandeep Sukumaran
Associate Professor, Centre for Atmospheric Sciences, IIT Delhi
PEDP Role: Faculty

Sajeev Philip
Associate Professor, Centre for Atmospheric Sciences, IIT Delhi
PEDP Role: Faculty

Learning Outcomes

Learners will be trained with the latest techniques and tools of data science to address problems at the intersection of climate change and public health.

During the course, you will:

Have the opportunity to bring in data problems from personal work areas to the class.

Have the opportunity to work on real-life datasets.

Become proficient in techniques and tools for data collection, curation, collation, clustering, classification, and visualisation.

Be familiar with important approaches to analytics using statistical and machine learning algorithms, with a focus on using data analytics to solve problems for social impact.

Understand data governance and ethics issues and how these manifest in practice.

Learn how to forecast future trends and risks as well as engage in data-driven decision making.

Know how to develop dashboards and interactive tools to make data understandable and actionable for better communication and awareness.

Cohort Composition

➤ This programme is designed for professionals who are employed, engaged, or intend to engage with the social sector as either data scientists or manage data-driven projects.

➤ It is for learners interested in learning how to use data science to address challenges at the intersection of climate change and public health.

➤ The cohort size for this programme will be around 70 learners and limited scholarships will be available for deserving candidates on a need and first-come first-served basis.

➤ There will be a key focus on Inclusion, Diversity, Equity, and Accessibility (IDEA).

Pricing And Scholarships

₹1.2 Lakhs

This programme is priced at ₹1,20,000 per learner

Scholarships

Limited scholarships are available on a first-come, first-served basis for deserving learners

FAQs

1. Who is this programme for?
This programme is for professionals in the social impact space, including those working in climate, health, development, policy, and data. Whether you're a data analyst, programme manager, or aspiring data scientist, the PEDP equips you to leverage data for real-world impact.

2. Do I need a technical background to join?
The programme offers two tracks: one for professionals with technical background (data science and analytics) and another for professionals with non-technical background (impact and programme management). A foundation module covers basic-level math, coding, and statistics for all participants.

3. What will I learn in this programme?
You'll learn how to collect, clean, analyse, and visualise data. Learners get hands-on experience with tools like spreadsheets, geospatial analysis, and basic machine learning. You will work on real-world case studies in climate change and public health. Most importantly, you will learn to use data in a way that's ethical, meaningful, and focused on creating real impact.

4. How is the programme structured?
It is a 20-week live online programme with live classes twice a week, hands-on projects, assignments, and discussion/lab sessions.

FAQs

5. What is the schedule?

Classes are on Wednesdays (6-8 PM) and Saturdays (10 AM-12 PM). Discussion/Lab sessions will also be conducted on Saturdays. Timings for this will be confirmed later.

6. Will I get a certificate?

Yes. Upon successful completion, you will receive a Certificate in Data Science for Social Impact from Ashoka University. Your track (Analytics or Management) will be mentioned on the certificate.

7. What is the course fee?

The programme is priced at ₹1,20,000 per learner.

8. Are scholarships available?

Yes. Limited scholarships are available for deserving learners on a first-come, first-served basis.

9. Can I join if I work full-time?

Yes, the programme is specifically designed for working professionals interested in Data Science. Live sessions are scheduled on weekday evenings and weekends, with recorded materials available as needed.

10. Who do I contact for more information?

For any questions, reach out to pedp@ashoka.edu.in or call us on + 91-7497099940.

APPLY NOW

Applications deadline - **31ˢᵗ August, 2025.**

Scholarships on a first-come, first-served basis.

🌐 https://x.ashoka.edu.in/data-science-2025

For any questions, please reach out at **pedp@ashoka.edu.in** or **+91-7497099940**.