SHIV NADAR
UNIVERSITY
DELHI NCR

ACADEMY OF
CONTINUING
EDUCATION

Certificate in **Data Science and Analytics for Business**

Learn to leverage the power of data & be better equipped to make smarter business decisions

jigsaw
A UNEXT COMPANY

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Message From **The Dean**

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Data is the asset that most 21st century businesses are leveraging to generate intelligence that is powering humans to collaborate with smart machines to create value that is redefining the boundaries of development. The Data Science & Analytics for Business program is designed to equip students with the cutting-edge skills required to create the 'data-driven intelligence' that guides such value-creating decisions in organizations.

Dr. Bibek Banerjee

Dean, School of Management and Entrepreneurship
Dean, Academy of Continuing Education
University Professor of Marketing, Strategy and Economics
Director, University Strategy & Planning

Data Science And Analytics -
The Surging Demand & Sky-High Pay

India's demand for data experts is at an all-time high, resulting in an upward career arc and generous salary packages from companies looking for trained professionals in business analytics.

Data, quite obviously, rules the 21st century! To adapt quickly and proactively to this data-driven world, it is important to learn how to source, organize, sanitize, align, analyze, synthesize, and interpret complex information gleaned from huge volumes of multi-source data. Needless to say, Data Science and Business Analytics have become indispensable to most businesses.

The application of Data Science & Business Analytics has begun to provide valuable insights into customer behavior enabling strategies for increased conversions and retention. Companies get access to insightful market analysis for new product development & brand management, improved operational efficiency, and increased accuracy in forecasting models. Various sectors including IT-ITES, FMCG, Healthcare, BFSI, Retail, etc are transforming their business models to utilize the power of data analytics and cloud computing.

Even though there is a massive influx of Data Science professionals in India every year, very few have the required expertise and specialized knowledge. As a result, there is a rising demand for professionals with advanced Data Science & Business Analytical skills.
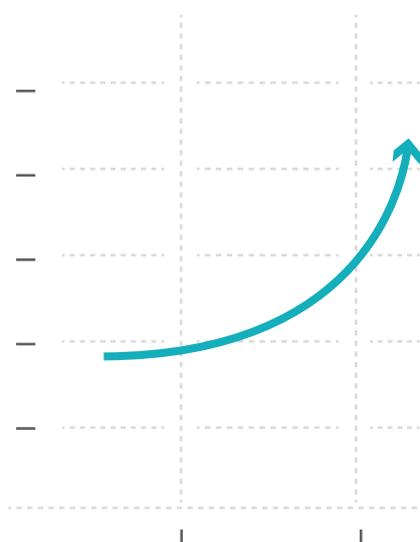
Data Science professionals with **3-10 years** of experience get annual salaries in the

INR 25-65 Lakhs

range, while those with more experience can command pay packages upwards of **INR 1 Crore**

MichaelPage

46%

Analysts predict that the country will have more than **11 million job** openings by **2026**. In fact, since **2019, hiring** in the **Data Science industry** has increased by **46%**

INDIA TODAY

By the end of **2024, 75%** of enterprises will shift from piloting to **operationalizing AI,** driving a **5X** increase in streaming

Data & Analytics infrastructures

Gartner.
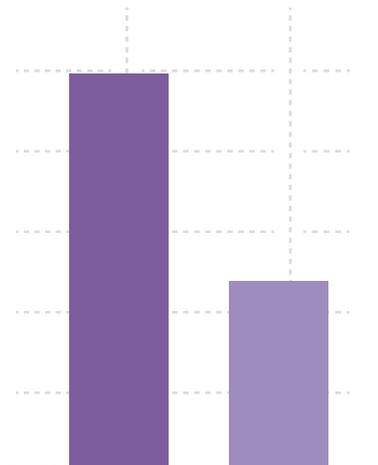
The **Data Science industry** will see a **Compound Annual Growth Rate (CAGR)** of **26.9%** from **2020 to 2027,** providing an eventual revenue value of

USD 25.94 billion

GRAND VIEW RESEARCH

Data Science And Analytics For Business - Your Stairway To Success

The **Certificate in Data Science and Analytics for Business**, jointly offered by SNU and Jigsaw, will help you create a strong foundation in both technical and business aspects of Data Science and Analytics. Through this robust & intensive program, you will explore Data Visualization, Predictive Modelling & Machine Learning tools for Advanced Prescriptive Analysis of structured and unstructured data. The pedagogy is a case study-based approach to real-life business scenarios with substantial practice on rich business datasets.

Career Outlook

A KPMG survey predicted 50% of the workforce will be preparing for data science and related technologies in the next few years.

As data explodes in quantity and complexity, organizations are finding it increasingly difficult to unlock its full potential. Across every industry and geography, Data and Analytics Transformation are helping companies achieve end-to-end analytics mastery. This has opened up a large potential job market for Data Science and Business Analyst profiles.

The rise of technology is currently transforming the labour market, leading to the automation of some jobs and tasks on the one hand and the emergence of new kinds on the other. Proactively preparing for this new reality requires an in-depth, granular understanding of these changes and their impact on jobs and employment. Academy of Continuing Education (ACE) is utilizing the potential of education technology; building and certifying skills across the age range; designing coherent and portable certifications, mapping the skills content of jobs and aligning existing skills and offering programs relevant for the future of work. The Certificate in Data Science and Analytics for Business (DSAB) is one such program.

The program will help you solve the most complex business problems using advanced Predictive Modeling & Machine Learning techniques so you can emerge as a champion thought leader & decision-maker.

Program Features

Program Offered By An Institute Of Eminence

Recognized by the **Govt. of India** as a **model academic institute of the future**, SNU promises you a high standard of quality curriculum, pedagogy & infrastructure.

Research-Focused Multidisciplinary Core Vision

You will benefit from the **cross-domain interplay & multidisciplinary academic theme** that we follow.

Personalized Mentorship & Tutorials By World Class Faculty & Practitioner Experts

Our core & visiting faculty hail from **top-ranking global institutes & leading corporate setups** & have rich industry experience. Also, our industry linkage facilitates access to thought leaders for ideas & mentorship.

Feedback & Coaching To Sharpen Skills

Our **case study-based hands-on approach** is complemented by extensive **feedback & coaching.**

Peer-To-Peer Learning & Collaboration

Through a **carefully selected cohort** of students, you will enjoy learning & associating with a **rich think tank** of an enthusiastic peer group.

Perfect Blend Of Synchronous & Asynchronous Learning

To promote critical thinking skills, we provide **LIVE access** to our **expert faculty** through **synchronous discussion sessions**, complemented with an impressive suite of **self-paced assignments & project work,** where you will collaborate with your peers for richer learning.

Networking Potential With Top Leaders In The Industry

Connect with a **rich cohort group, world-class faculty & top industry thought leaders** for a greater exchange of ideas & opportunities.

Case Studies & Projects From the Industry

You will be challenged with projects like the **SME-mentored Bring Your Own Project (BYOP)**, actual case studies for greater situated cognition & applied learning.

3-Month Access To Learning Material Even After Program Completion

We provide access to an **extensive e-learning content library, practice assessments & case studies** that supplement LIVE lectures throughout the program & extend to 3 months after program completion.

Placement Assistance

SNU & Jigsaw will offer **placement assistance** to all participants who successfully qualify in the program. This will include mock interview practice, access to job postings from several firms, resume reviews & inputs.
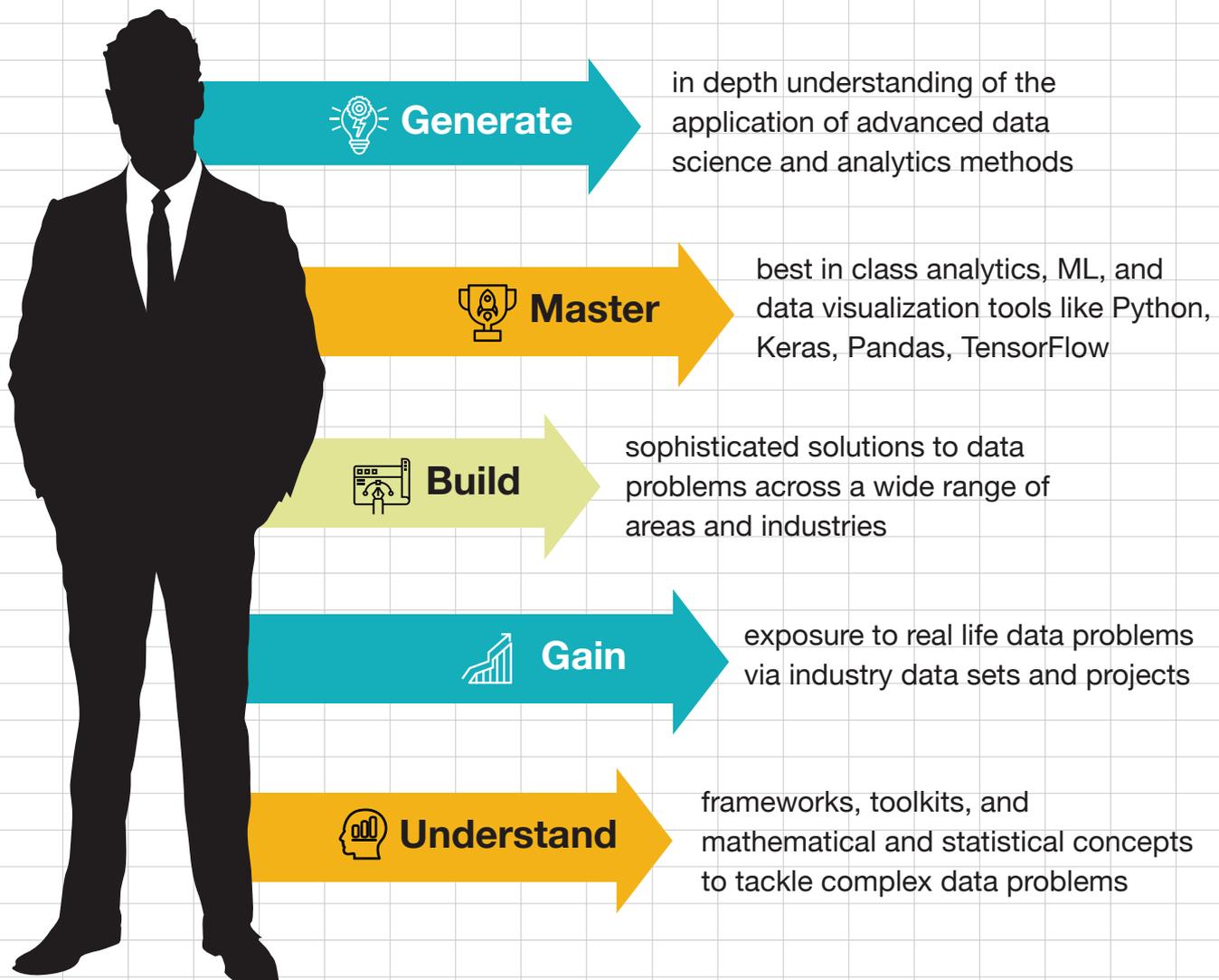
Duration:
33 Weeks (190+ Hours)

Format:
Online LIVE Instructor-Led Sessions

How Does Our University Transcript Unlock New Opportunities For You?

Participants who successfully complete the Certificate in Data Science and Analytics for Business will receive a University Transcript along with the certificate which will help them seek a waiver of courses based whenever they join a Master's program in Business Analytics and where the University is willing to accept them.

The courses covered in the program are equivalent to 15 academic credit points. The 15 credit points earned are eligible for a waiver at a Master's program in Business Analytics proposed to be offered by the School of Management and Entrepreneurship, Shiv Nadar University, Delhi NCR.

Learning Outcomes

Generate in depth understanding of the application of advanced data science and analytics methods

Master best in class analytics, ML, and data visualization tools like Python, Keras, Pandas, TensorFlow

Build sophisticated solutions to data problems across a wide range of areas and industries

Gain exposure to real life data problems via industry data sets and projects

Understand frameworks, toolkits, and mathematical and statistical concepts to tackle complex data problems

In-Demand Tools You'll Be Able To Master

Excel	SQL	python™	Power BI
NumPy	Keras	ANACONDA®	TensorFlow
scikit learn	pandas	matplotlib	seaborn
R	jupyter		
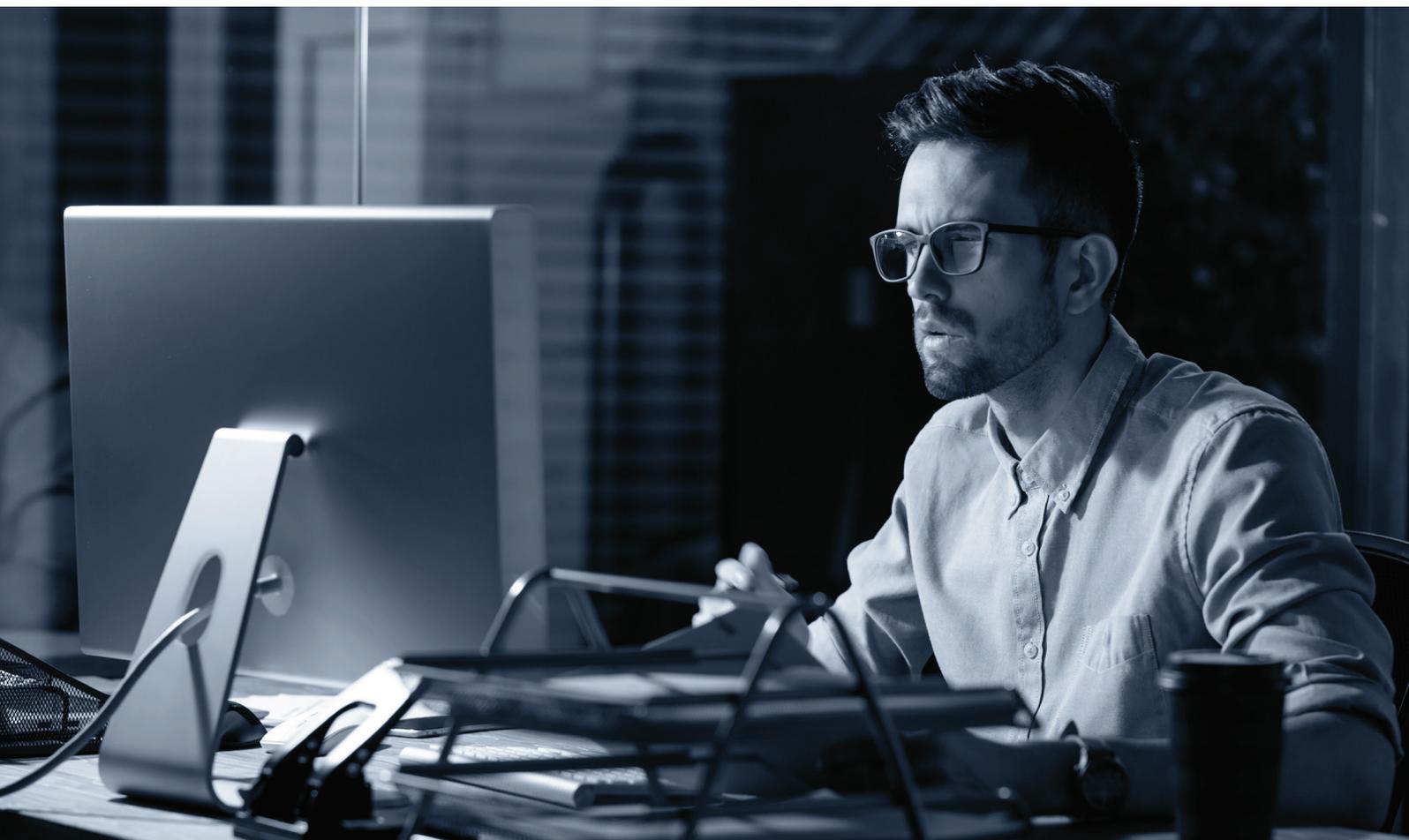
Program Curriculum

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The content is organized into highly cohesive modules, each of which helps the participant earn a distinct badge of qualification.

Week 1

- Overview of Analytics, Analytics Methodology and Problem Definition (3 hours)

Week 2

- Exploratory Data Analysis - Principles and Output (3 hours)
- Querying with SQL (3 hours)
- Data Manipulation with SQL (3 hours)

Week 3

- Recap & Assignment discussion + Industry Guest Lecture (3 hours)
- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

> 🛡 **Descriptive Analytics with SQL**

Week 4

- Introduction to Python (3 hours)
- Data Manipulation with Python (3 hours)

Week 5

- Recap + Assignment discussion + Industry Guest Lecture (3 hours)

Week 6

- Recap + Assignment discussion + Industry Guest Lecture (3 hours)

Week 7

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

> 🛡 **Python Programming for Data Science & ML**

Week 8

- Introduction to Probability and Statistics (3 hours)
- Hypothesis Testing - Part 1 (3 hours)

Week 9

- Hypothesis Testing - Part 2 (3 hours)

- Hypothesis Testing Examples and Case Studies (3 hours)

Week 11

- Introduction to Predictive Modeling - Linear Regression (3 hours)

- Linear Regression - Case Study (3 hours)

Week 13

- Logistic Regression - Case Study (3 hours)

- Time Series (3 hours)

Week 15

- Recap + Assignment discussion + Industry Guest Lecture (3 hours)

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

Statistical Modeling with Python

Week 10

- Recap & Assignment discussion + Industry Guest Lecture (3 hours)

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

Statistics and Applications in Data Science

Week 12

- Logistic Regression - Part 1 (3 hours)

- Logistic Regression - Part 2 (3 hours)

Week 14

- Time Series (6 hours)

Week 16

- Introduction to R (3 hours)

- Data Manipulation with R (3 hours)

Week 17

- Data Manipulation with R (3 hours)

- Data Visualization with R (3 hours)

Week 18

- Statistical Modeling with R (3 hours)

- Recap & Assignment discussion + Industry Guest Lecture (3 hours)

Week 19

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

  R for Data Science

- Introduction to Machine Learning - Tree models and Data Wrangling (3 hours)

Week 20

- Clustering Models (3 hours)

- PCA (3 hours)

Week 21

- Clustering Models (3 hours)

- PCA (3 hours)

Week 22

- Recap + Assignment discussion + Industry Guest Lecture (3 hours)

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

  Machine Learning Models with Python

Week 23

- Qualitative Data Analysis and Web Scraping (3 hours)

- Introduction to Text Mining Concepts (3 hours)

Week 24

- Introduction to Text Mining Concepts (3 hours)

Week 25

- Introduction to Neural Networks (3 hours)

Week 26

- Understanding Cloud Computing and Cyber Security (3 hours)

Week 27

- Recap & Assignment discussion + Industry Guest Lecture (3 hours)

  Advanced ML techniques

- Storytelling with PowerBI (3 hours)

Week 28

- Storytelling with PowerBI (6 hours)

Week 29

- Practice Session + Instructor Guided Tutorials on Assignments (3 hours)

> **Storytelling with PowerBI**

Week 30-32

- Project Submissions and Viva (16 hours)

Week 33

- Final Certificate

Please Note: For those interested, we also give access to self-paced learning content around these Big Data concepts:

Introduction to Big data

✓ The world of big data, parallel computing, history of Hadoop, The use cases of Hadoop in real-time

Introduction to Hadoop, HDFS & its Architecture

✓ Hadoop distributed file system, Master-slave architecture, Hadoop components

Fee Structure

✓ Registration Fees: INR 25,000 + GST
✓ Program Fees: INR 95,000 + GST

Avail NO COST EMI for **15 months*** OR
A **Cash Discount of INR 15,000 + GST** on payment of full fees upfront!

*T&C Apply

Placements Partners

Mu Sigma	accenture	wipro	IBM	Gramener Insights as Stories
genpact	JPMorgan Chase & Co.	FRACTA	EQUIFAX	

DID YOU KNOW?

Our learners enjoy an average salary hike of around 30% after completing this comprehensive program that helps you solve the most complex business problems using advanced Predictive Modeling & Machine Learning techniques!

Learner Testimonials

Rijul Aggarwal

DSAB

"My journey has been outstanding, we get a lot of assignment where we can practice our skills. All the credit to the instructors for making all the sessions fun and interactive. I personally recommend this program to all those who want to pursue Data Science."

Shruti

DSAB

"The content is very well structured, faculty is experienced and amazing. I have learnt a lot of new things and have started to analyse data in a more matured way. This is a very flexible course and you can watch the recordings if in case you miss the live sessions."

Mohith

DSAB

"Along with just teaching Python or MySQL, real life business scenarios were also introduced that helped me gain new perspective. I am looking forward to future sessions specially the machine learning parts. Faculty have industrial experience and it shows in the way they teach."
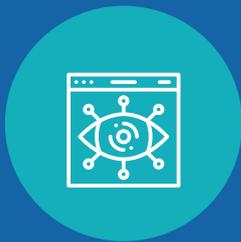
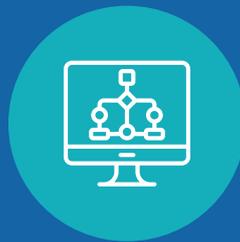# Diverse Roles To Explore In Data Science & Analytics

Business Analyst

Data Analyst

Data Scientist

Data Visualization Specialist

ML Engineer

Analytics Consultant

Big Data Engineer

Statistician

Who You Will Learn From

—

The Faculty for the **Certificate in Data Science and Analytics for Business** is an active community of acclaimed scholars, industry experts & professionals on the cutting-edge of high technology.

Dr. Jaideep Ghosh

Ph.D., University of Pittsburgh, USA
M.S., University of Pittsburgh, USA
Department of Decision Sciences,
Operations Management, and Information Systems
School of Management and Entrepreneurship

Dr. Vijayta Fulzele

Ph.D., IIT Delhi
M.B.A., IIT Kanpur
Department of Decision Sciences,
Operations Management, and Information Systems
School of Management and Entrepreneurship

Dr. Meenakshi Ghosh

PhD., (Economics) University of Illinois, USA
Department of Economics and Public
Policy,
School of Management and Entrepreneurship

Dr. Vallurupalli Vamsi

Ph.D.Indian Institute of Management Calcutta
Department of Decision Sciences,
Operations Management, and Information Systems
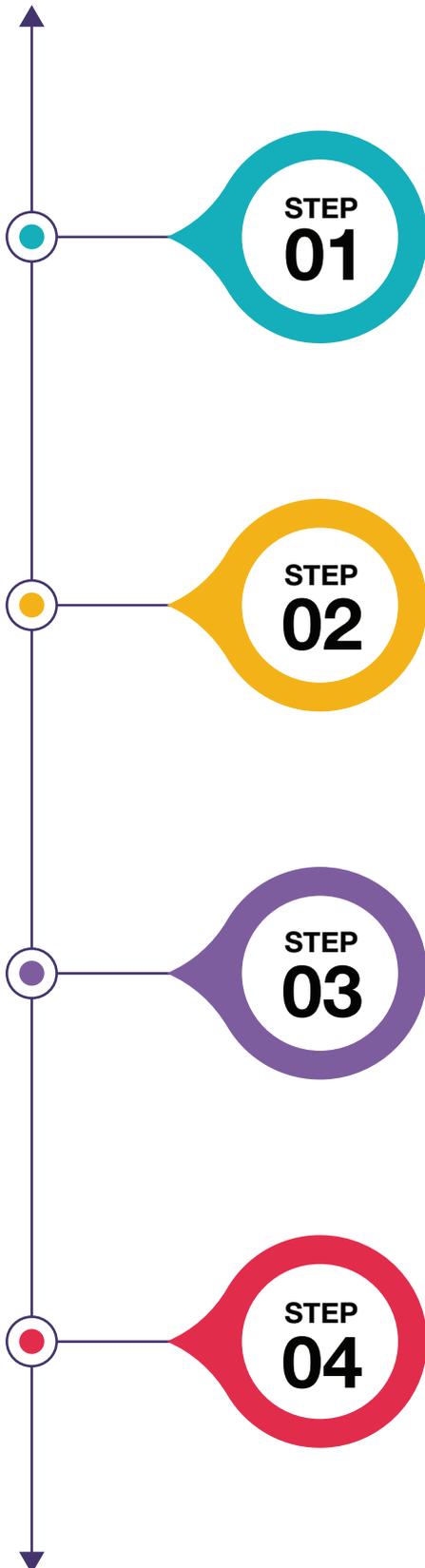School of Management and Entrepreneurship

Dr. Satyam Mukherjee

Ph.D.Indian Institute of Technology Madras
MSc University of Pune
Department of Decision Sciences,
Operations Management, and Information Systems
School of Management and Entrepreneurship

How To Apply?

Application Form

STEP 01

Applicant needs to apply online at **https://ace.snu.edu.in/dsab-form** & fill-up their personal & academic details.

Registration Fee Submission

STEP 02

Pay the Registration Fee of INR 25,000 + 18% GST to confirm the admission for the program.

Admission Offer Letter

STEP 03

On successfully completing the above step, they will receive a confirmation letter from our admissions team with further details.

Academic Fees Submission

STEP 04

Further, the participant will have to pay the Course Fee of INR 95,000 + 18% GST & upload documents to university portal to complete the Enrolment Process.

Who Can Apply?

Candidate must hold a Bachelor's Degree or equivalent or must have enrolled in any recognized undergraduate degree program, with at least 50% marks or equivalent CGPA from any of the recognized Universities, Deemed Universities, Institutions of National Importance or from a Professional Body including ICAI, ICSI, ICWAI, etc.

Candidate must have studied Mathematics in 10+2 board examination

While work experience is not essential, entry-level professionals who aspire for a career in Data Science are welcome to apply for the program

Selection will be based on application credentials & admission office interactions.

The Prerequisites To Get Certified

- ✔ Minimum 50% score in evaluations
- ✔ Project completion as per the satisfaction of SME mentor
- ✔ Minimum 50% score in Project Viva
- ✔ Minimum 75% attendance in online sessions (excluding Q&A which are optional)
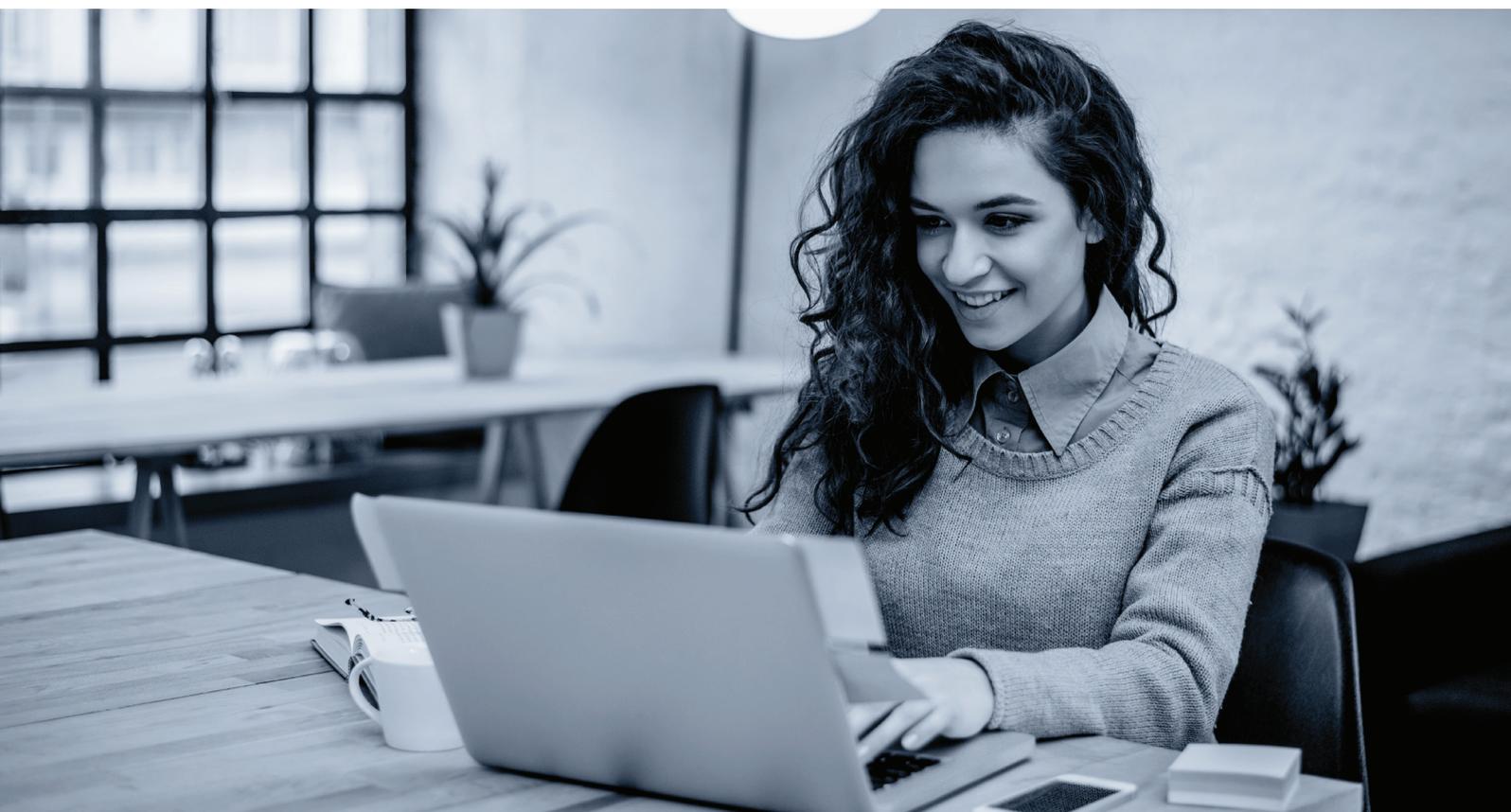
About Shiv Nadar University, Delhi NCR

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Shiv Nadar University is a student-centric, multidisciplinary and research-focused university offering a wide range of academic programs at the Undergraduate, Master's and Doctoral levels. The University was set up in 2011 by the Shiv Nadar Foundation, a philanthropic foundation established by Mr. Shiv Nadar, founder of HCL.

The University has recently been selected as one of only eight private "Institutions of Eminence" by the Government of India. In the NIRF (Government's National Institutional Ranking Framework), the University has been the youngest private institution in the 'top 50' Overall list. Shiv Nadar University has been accredited with Grade 'A' by NAAC (National Assessment and Accreditation Council). It is also among a select group of green-field institutions in the country which were awarded the prestigious Atal Incubation Center grant by the NITI Aayog, Government of India, in the very first round in 2017

About Academy of Continuing Education (ACE):

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Academy of Continuing Education provides access to best-in-class knowledge, practices and skill development through three inter-related platforms: Executive Education programs, Professional Certification courses and Continuing Education/University Extension offerings. ACE's mission is anchored in the twin ideas of enabling 'lifetime learning' and harnessing the very best of Shiv Nadar University's rich intellectual resources. A university's long term impact on society comes from the generation of advanced knowledge as well as disseminating this learning in a contextual and relevant fashion. ACE seeks to be such a gateway to high value education and to serve an ecosystem of learners and leaders in India and around the world.

About Jigsaw

Headquartered in Bengaluru, India, Jigsaw (A part of UNext) was founded by the duo Gaurav Vohra and Sarita Digumarti in the year 2011. Upskilling to emerging technologies had become the need of the hour, with technological changes shaping the career landscape. To help learners upskill, stay relevant & get noticed, Jigsaw began its journey by offering programs in data science & other emerging technologies. After a decade of successfully building Jigsaw - by helping freshers & young professionals advance their careers & organizations stay up-to-date - the merger with UNext in 2021 offered the team a larger canvas to carefully curate industry-relevant professional programs. The domain experts & educators at Jigsaw continue to curate meticulously structured courses with industry-relevant curricula to help train aspirants in areas like Analytics, Data Science, Machine Learning, AI, Product Management, People Analytics, Digital HR, Business Analytics, Cyber Security & Cloud Computing, to name but a few.

Contact Us

To know in detail about the program and its prospects, get in touch with our academic counselors today!

☎ (+91) 1207170457

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