

Certification Program on Data Sciences and Analytics for **Business**

Transition from Descriptive to Prescriptive Analytics to view a problem as an opportunity and identify its optimal solution

Emerge as a technocratic soothsayer through intelligent big data analysis to reimagine industry 4.0 and beyond

Offered by

SHIV NADAR UNIVERSITY

Recognized as an **Institute of Eminence**
by Government of India

snu.edu.in

Powered by



JIGSAW ACADEMY
a manipalglobal education
investee company

Message from Our Visionaries

“At Shiv Nadar University, our mission is to create an enduring, comprehensive global center of excellence in higher education, which is learner-centric, anchored in research & innovation, driven by an outstanding faculty, and supported by national & international partnerships. We offer you futuristic programs that are tailored optimally to boost your career prospects as you stay life-long learners in today's VUCA (volatile, uncertain, complex and ambiguous) world -- we arm you with our VUCA: vision, understanding, clarity and agility. This program in Data Sciences and Analytics for Business is a unique strategic convergence of science, economics and management in an interconnected IT framework, with specifically designed learning outcomes that will give you a clear edge as you drive ahead to the future.”

Dr. Rupamanjari Ghosh

Vice-Chancellor & Director of the School Of Natural Sciences
Shiv Nadar University



“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

Senior Dean and Head of Strategic Initiatives
Director, School of Management & Entrepreneurship
Shiv Nadar University

“After four decades of rapid development of rigorous foundations in Computer Science, the discipline is now influenced by applications focused on processing of huge amounts of data produced by social and sensor networks, and other forms of digitized information. This is shifting the emphasis from basic programming and discrete mathematics to areas like statistics, probability and data-driven decision mechanisms which are all captured under the umbrella of Data Science that all budding Engineers, Scientists and Decision makers need to be conversant with in the coming decades.”

Dr. Sandeep Sen

Director of the School Of Engineering
Professor, Computer Science and Engineering
Shiv Nadar University



“Today we live in a complex world. We face innumerable choices, as individuals, as policymakers, and as company executives, and have to make decisions that can potentially have a deep and long-term impact. To make good decisions, we need to make use of available data. That is why, in today’s world, it is critical to have the ability to make sense of data. One has to be able to gather, analyze, visualize, and interpret data. This data analytics course promises to do exactly that, enable you to thrive in a world with ever-expanding data generation. It will give you all the tools necessary - data cleaning, analysis, visualization, interpretation - to help take better decisions and solve complex societal problems. Students from any background, with a liking for analytical and logical ways of doing things, will benefit from the program.”

Partha Chatterjee

Dean of International Partnerships,
Professor and Head of the Department of Economics
Shiv Nadar University

“Analytics industry experts and hiring managers are very clear about what ‘kind’ of analytics or Big Data and Machine Learning professionals they want to hire. Jigsaw Academy provides extremely specific, tailor-made content that caters to the unique requirements of job roles and profiles, creating analytics specialists not generalists.”

Gaurav Vohra

CEO,
Jigsaw Academy



Winning Over Chaos

In a world of volatility, uncertainty, complexity and ambiguity, challenges are complex and novel, so solutions require a proactive re-imagination and radical pre-emptive transformation. To do so, the governments, businesses and civil societies alike need to derive the right intelligence out of data. The data driven decisions are well informed and often take a 360-degree view of the situation. Today, the organizations are sitting on a huge pile of data. Forbes predicts that more than 150 zettabytes of data will need analysis by 2025. On one hand, data provides opportunity in terms of getting new insight, whereas on the other hand, it offers tremendous challenge in analyses and interpretation. In some cases, data science prowess and relevance for business decisions do not go hand in hand. Hence, there is a huge and unmet demand of data science expertise that can inform and support better business decisions.



Carpe Diem

Data science is the vehicle that needs to be commandeered; management needs to get behind the wheels quickly to lead the society and industry into greater clarity and better solutions. To adapt quickly and proactively, you must learn how to source, organize, sanitize, align, analyze, synthesize, and interpret complex information gleaned from huge volumes of multi-source data. Hence the demand for Data Science and Analytics is ubiquitous across all verticals – from IT-ITES to FMCG, Healthcare - Defense, BFSI to Retail, Manufacturing to Logistics and Supply Chain – the canvas is unending. With growing infrastructure on Cloud, advancements in IoT, ML and AI has erupted into an avalanche of applications. The 21st Century wants Data Analysts, Data Scientists, Visualizers, Big Data Architects, Machine Learning Engineers, and most importantly those whose technical prowess can impact business and society. Are you ready to seize your opportunity?

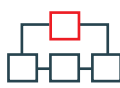
DATA SCIENCE



ANALYSIS



STRUCTURE



ALGORITHM



PROCESS



PROGRAMMING



SOLVING



KNOWLEDGE

A program that empowers you to make a career in the world of Data Science and Business Analytics and also those that are driven by Analytics

Shiv Nadar University (SNU) in partnership with **Jigsaw Academy**, a globally recognized premier training provider in the fields of data science & emerging technologies, has brought to you a unique opportunity to transform your career and master the expertise. The program, **Data Sciences and Analytics for Business (DSAB)**, will grant you mastery over Data Sciences and Machine Learning so that you can solve the most complex business problems using advanced predictive modelling and machine learning techniques, to emerge as champion thought leaders and decision makers.

DSAB – A Holistic Framework for Applied Data Analytics

The DSAB program, jointly offered by SNU and Jigsaw, will create a strong foundation in both technical and business aspects of data science and analytics. The program proceeds to then explore data visualization, predictive modelling, and machine learning tools for advanced prescriptive analysis of both structured and unstructured data. The pedagogy is a case study-based approach on real-life business scenarios with substantial practice on rich business datasets.

“Break beyond traditional benchmarks through accelerated forecasting of Optimal Business Strategies”

The SNU-Jigsaw Edge – the DSAB Promise



**Learning from an
Institute of Eminence**

SNU has been recognized by the Govt. of India as a model academic institute of the future. Therefore, you can expect a high standard of quality curriculum, pedagogy, and infrastructure from a prestigious brand.



**Research-focused
Multidisciplinary Core Vision**

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



Personalised Mentorship and Tutorials by Practitioner Experts

Our core and visiting faculty have rich industry experience. Also, our industry linkage facilitates access to thought leaders for ideas and mentorship.



Feedback and Coaching to Sharpen Skills

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



Peer-to-Peer Learning and Collaboration

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



World Class Faculty

Our Faculty hails from top ranking global institutes and leading corporate setups to bring you the best blend of academia and industry to learn from.



Perfect Blend of Synchronous and Asynchronous Learning

To promote critical thinking skills, we will emphasize on live access to our expert teachers through synchronous discussion sessions. This will be complemented with a rich suite of self-paced assignments and 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, and leading industrial thought leaders for greater exchange of ideas and opportunities.



Case Studies and Projects From the Industry

You will be challenged with actual case studies and projects for greater situated cognition and applied learning.



Exposure to Competitive Hackathons

Fire your imagination through opportunities to compete on relevant challenges through exciting hackathons with equally exciting rewards.

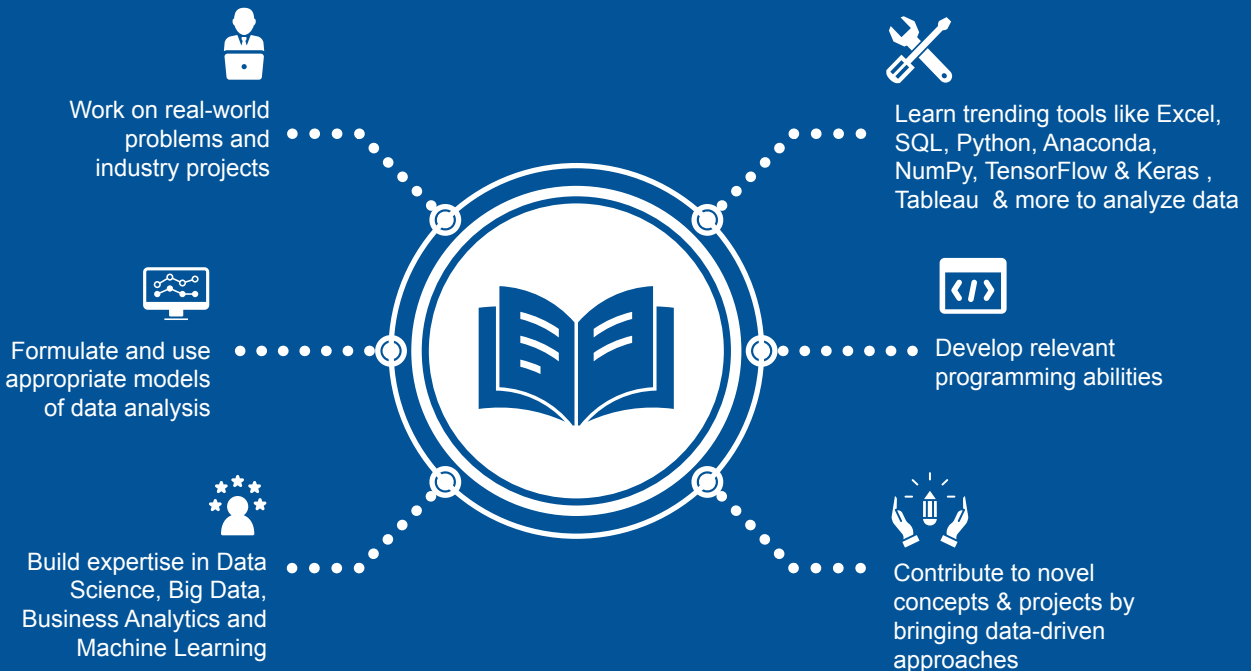


Secure your Future

SNU and Jigsaw will offer placement assistance to all participants who successfully qualify in the program. The average salary hike after program completion is around 30%.

Learning Outcomes

Upon the completion of the program, one will be able to immerse themselves in fields of technology, business and communication. The new comprehensive Data Science skill sets acquired through this certification would enable one to launch a lucrative career in analytics. By the end of the program, students will be able to:



Pedagogy

Data Sciences and Analytics for Business (DSAB) has been planned for a select group of students for effective personalized attention given to each one of them. Live classes will be conducted online with ample hands-on practice in a simulated environment. The program will span over 14 weeks with approximately 9 hours of contact tutorials per week, spread across 3 sessions per week. Significant additional time and effort will be required for practice, self-study, collaborative activities, and assignments.



Earn proficiency badges as you progress

Key topics



Through the course of 14 weeks, students will achieve mastery over steps in the process of Data Science and Analytics and learn about the use of powerful tools for this purpose





Program Curriculum

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

Certificate Program in Data Science and Machine Learning

Week	Day	Topic
1	1	Overview of Analytics, Analytics Methodology and Problem Definition
	2	Using Excel for Basic Data Analysis
	3	Exploratory Data Analysis - Principles and Output
2	4	Querying with SQL
	5	Exploratory Data Analysis with SQL
	6	Recap/Assignment Discussion + Industry Guest Lecture
3	7	Instructor Guided Tutorial & Assignments Submission
	 Badge Earned: Descriptive Analytics with SQL and Excel	
4	8	Introduction to Python
	9	Data Manipulation with Python
4	10	Data Manipulation with Python
	11	Data Visualization with Python
	12	Descriptive Analytics with Python
5	13	Recap/Assignment Discussion + Industry Guest Lecture
	14	Instructor Guided Tutorial & Assignment Submission
5	 Badge Earned: Data Manipulation and Wrangling with Python	
	15	Introduction to Probability and Statistics

Certificate Program in Data Science and Machine Learning

Week	Day	Topic
6	16	Hypothesis Testing - Part 1
	17	Hypothesis Testing - Part 2
	18	Recap/Assignment Discussion + Industry Guest Lecture
7	19	Instructor Guided Tutorial & Assignment Submission
	 Badge Earned: Statistics for Data Science	
	20	Introduction to Predictive Modelling - Linear Regression
	21	Linear Regression - Case Study
8	22	Logistic Regression - Part 1
	23	Logistic Regression - Part 2
	24	Logistic Regression - Case Study
9	25	Recap / Assignment Discussion + Industry Guest Lecture
	26	Instructor Guided Tutorial & Assignment Submission
	 Badge Earned: Statistical Modelling with Python	
	27	Introduction to Machine Learning - Tree models and Data Wrangling
10	28	Clustering Models
	29	Machine Learning - Random Forest
	30	Introduction to Text Mining and NLP concepts

Certificate Program in Data Science and Machine Learning

Week

Day

Topic

11

31

Introduction to Neural Networks and Deep Learning

32

Recap /Instructor Guided Tutorial & Assignment discussion + Industry Guest Lecture

33

Instructor Guided Tutorial & Assignment Submission



Badge Earned: Machine Learning Models with Python

12

34

Storytelling with Tableau

35

Storytelling with Tableau & Instructor Guided Tutorials on Assignments



Badge Earned: Storytelling with Tableau

13

Week 13

Capstone Project - introduction

14

Week 14

Project Submissions and Viva



Certificate Earned: Data Sciences and Analytics for Business





Career Prospects

The data Big Bang requires a substantial pool of highly skilled data science and analytics experts. Professionals with a strong data science background will drive most of the industries forward and are sure to play a vital role in defining the companies of the future. So, career prospects are exciting with a high number of employment opportunities, where there is huge scope to create impact and command lucrative compensation.

“Transform your Business through intelligent mapping and analysis of the Industry Landscape”

Who are some of our Placement Partners?

Once you successfully complete the program, you will enjoy a rewarding career in the data science and analytics fields with the best of organizations. Here are a few industry movers that our alumni have been thriving in:



JPMORGAN CHASE & Co.



EQUIFAX

Gramener

About the Partner Institutions

Shiv Nadar University

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

SHIV NADAR UNIVERSITY

is chosen as

INSTITUTION OF EMINENCE

by the Government of India



5

Schools



42

Programs
Offered



36

Departments



~2,200

Students



~250

Faculty Members



₹3000 Cr.

Investment



286

Acre Campus



30+

Sports Facilities

Jigsaw Academy

Headquartered in Bengaluru, India, Jigsaw Academy was founded by the duo Gaurav Vohra and Sarita Digumarti in the year 2011. Upskilling to emerging technologies has become the need of the hour, with technological changes shaping the career landscape. Jigsaw Academy offers programs in **data science & emerging technologies** to help you **upskill, stay relevant & get noticed**. The domain experts & educators at Jigsaw Academy offer meticulously structured courses with **industry relevant curriculum**. The domain experts here offer meticulously structured courses to help train professionals in the areas of **Analytics, Data Science, Machine Learning, Big Data, Business Analytics, Cyber Security & Cloud Computing**, to name but a few.



A Manipal Global
Investee Company



Recognized as the No.1 institute for
data science training in 2019,
2018, 2017, 2016, 2014 and 2013



Awarded the prestigious “Partner
of Excellence Award 2019” by
NASSCOM



400+ years of combined
teaching experience



3000+ companies with
Jigsaw Academy students



1M+ hours of learning
content viewed



For additional queries,
please get in touch with us at:

☎ Phone number: **01207170441**

✉ Email address: **DSAB@snu.edu.in**

🌐 Website: **<https://sme.snu.edu.in/DSAB>**

