



BRIDGE
School of Management
linking education to industry



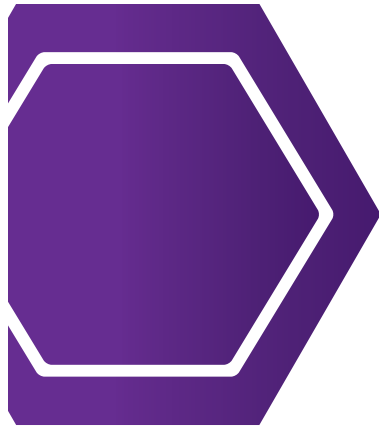
Post Graduate Program in Data Science, Design and Visualization

A Venture of:

hindustantimes

Northwestern

SCHOOL OF
PROFESSIONAL STUDIES



Post Graduate Program in Data Science Design and Visualization

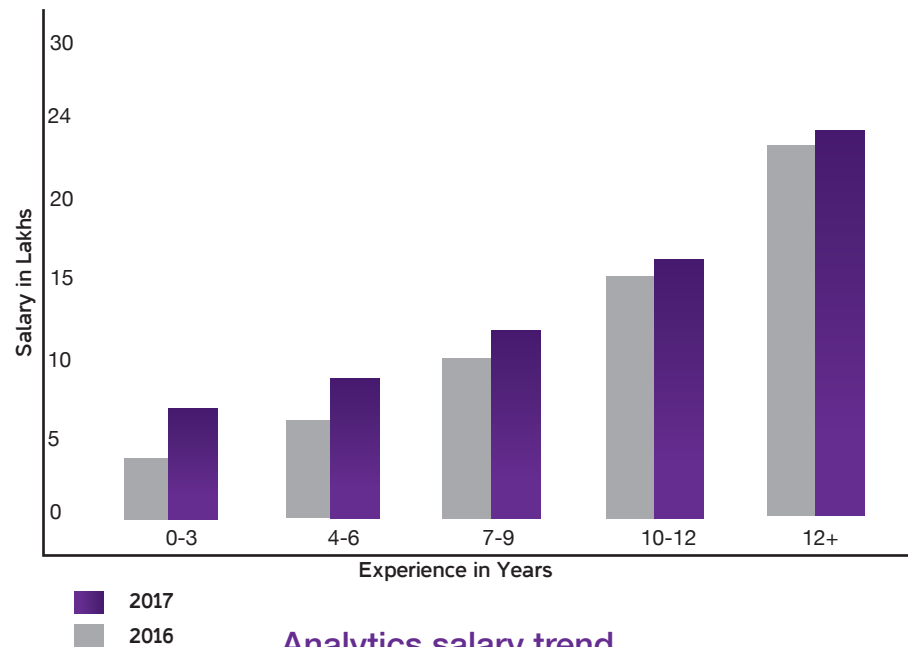
“
DATA SCIENTIST IS
THE SEXIEST JOB OF
THE 21ST CENTURY –
Harvard
Business Review
”

“
INDIA WILL NEED 2
LAKH DATA
SCIENTISTS IN THE
NEXT FEW YEARS –
McKinsey
”

Considering the exciting possibilities associated with the use of analytics and the declining costs of development and deployment of analytical solutions, organizations are now turning to analytics to improve their business performance. The industry demand for analytics professionals with requisite knowledge and skills is on the rise, providing newer opportunities in the job market.

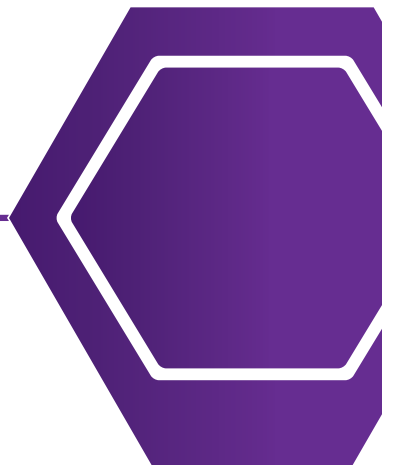
The number of analytics jobs almost doubled from April 2016 to April 2017. This is a significant increase compared to last year figures. The number of analytics jobs increased by 52% from April 2015 to April 2016, and by 40% from April 2014 to April 2015.

Analytics salaries saw the biggest jump at the entry level (0-3Yrs experience) last year. There was almost a 61% jump in salaries in this experience bracket – from 4.1L to 6.6L average. At entry level, almost 76% of analytics professionals are under the 0-6 Lacs salary bracket. A transition to senior analytics leaders, with more than 12 years of experience, can lead to almost 50% increase in salaries.



Source: Analytics India Salary Study 2017:

<http://analyticsindiamag.com/analytics-and-data-science-india-jobs-study-2017-by-edvancer-aim/>





Background



The quantum of data seen in all of civilization's history doubled in the last five years. While the primary reasons for this exponential increase include easier data capture, cheaper data storage and improved computing power, it is the human element of 'making sense' of the data that has become the biggest challenge in recent years.

McKinsey forecasts that

800,000
Analytics



Jobs will be available in the next **>> 5 years**

McKinsey estimates that only



200,000
professionals

will be trained to do those jobs.
This has created a vast need for trained
analytics professionals in the global talent
pool.

Northwestern University

Northwestern University is one of the world's leading educational institutions with campuses in Evanston, Chicago, Illinois and Doha. It was ranked 12th among the nation's best universities by U.S. News. Northwestern has a dozen schools and colleges, including **Kellogg School of Management**, ranked 3rd among the nation's best business schools by U.S. News.

Northwestern University School of Professional Studies (NU-SPS) has focused on adult learning as a core part of Northwestern's mission for more than 8 years, setting the standard for higher education for adults. Northwestern University (NU) is a member of the University Professional and Continuing Education Association (UPCEA).

Bridge School Of Management

Bridge School is an initiative by Hindustan Times. It has been conceived to address the 'employability' gap – to help India's rapidly growing service and manufacturing industry to educate and empower employees for a 21st century global workplace. Leveraging best-in-class knowledge, experience, expertise and technology, Bridge School aims to provide innovative learning environment and industry-focused management programs to its students.

“Top Ranked Analytics Program”

Bridge School of Management is a leader in the field of analytics education in India. Our flagship Predictive Business Analytics program (offered in partnership with Northwestern University, USA) is among the top analytics programs in the country.

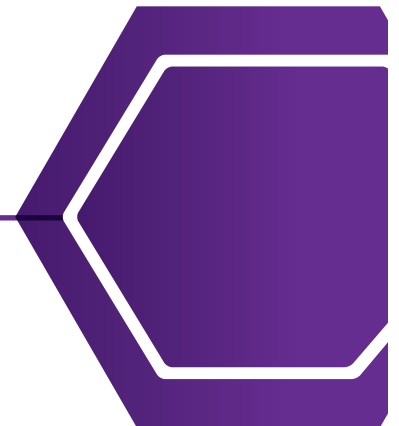
It has been ranked*

4th in the
Country



2nd in
North India

*Analytics India Magazine rankings.



Post Graduate Program in Data Science, Design and Visualization

The Post Graduate Program in Data Science, Design and Visualization is a 9.5-month, end-to-end program offered in partnership with Northwestern University, USA. The program has been designed for working professionals or fresh graduates and covers the most important areas of analytics.

The program will benefit those who intend to-



Enter the world
of analytics



Use data-driven decision
making in their current
area of work



Upgrade their skills in
the analytics domain

It covers all the basics of analytics and offers domain-specific, application-oriented training.



0.5 %

35 %

0.01 %

45 %

70 %

65 %



Program Objectives & Outcome



The program aims to train participants for a successful career in business analytics, across a range of functions. The course is designed, developed and taught by the globally renowned faculty of Northwestern University, USA and senior industry professionals. The hands-on program ensures end-to-end, application-oriented learning and execution of concepts essential in the industry.

Participants will be provided with placement assistance during the program.

Participants will learn enough analytical models, methods and tools to get a job in descriptive or diagnostics analytics, across sectors. They can also do introductory predictive models for various domains from day one. Job opportunities could range from (indicative, but not limited to):



Descriptive Analytics or Diagnostic Analytics role

Business Analyst in product/service organizations

Analytical roles in existing function/domain (For example, moving to a Marketing Analytics role from a Marketing role or moving to analytics roles within accounting which includes revenue forecasting in the budgeting group)

Program Details

Eligibility



Participants applying for this program can be graduates in any discipline, who are comfortable working with numbers.



**9.5
months**

blended program



Pedagogy

In order to cater to the needs of working professionals, the program is delivered in the blended mode, which does not require the participant to take any time off work. The content is covered through:

Face-to-face classes at the Bridge centre on every weekend

(either Saturday or Sunday)



Online self-learning through the week;



7 to 10 hours

a week

Curriculum



Software tools covered during the program:

MS Excel

R

d3.js

Tableau

There are four sequential courses, of 8 to 10 weeks each. The course details are as below.

1. Database Systems and Technologies

Database systems are at the core of modern information systems. In this course, participants will explore the principles of data management and data extraction. Database design, modeling, and implementation concepts will be reviewed and discussed. They will learn how the different forms of data such as structured data in SQL databases, and unstructured data in NoSQL database systems are stored and accessed. They will also learn how to query a database and extract useful information to support the decision making process for information design and strategy. The course has hands-on modules that provide the they with SQL and NoSQL programming skills in order to extract and process data from a database engine and present the information in forms suitable for end-users.

2. Introduction to Data Analytics and R

This course will introduce participants to their primary tool R. It will address the appropriate uses of analytics and its limitations along with defining how to approach the various stakeholders within an organization with analytic information. There will also be a review of the ethical, regulatory, and compliance issues related to a given business problem and/or solution. They will spend time interpreting performance-based organizational issues while concurrently identifying solutions for the same in addition to identifying best practices for engaging, implementing, and sustaining organizational changes.



3. Applied Analytics for Business

Participants will learn to apply statistical techniques to the processing and interpretation of data from various industries and disciplines. The program introduces statistical models as they are used in predictive analytics. It will address issues of statistical model specification and model selection, as well as best practices in developing models for management.

4. Data Visualization and Communication

The participants will learn by doing—working with data and text, utilizing models of text and data, working within an open-source programming environment, and building interactive visualizations for the web. The program will review psychology of human perception and cognition, and best practices in visualization and web design. Assignments involve reviewing and developing interactive visualizations of text, time series, networks, and maps. This is a project-based program with individual and team assignments.





Faculty

■ **Lance Levenson**

Quantitative portfolio manager and data scientist, Consultant in the quantitative trading and predictive modeling spaces
Master's degree in financial/applied mathematics from the University of Chicago.
Bachelor's degrees in astrophysics and mathematics from Arizona State University

■ **Bryan Bennett**

Educator, Presenter of Consumer Insights, executive leadership, customer relationship management, and healthcare technology
MBA from Northwestern University's Kellogg School of Management.

■ **Mark Clare**

Founder of New Value Streams Consulting with over 20 years of experience
Author -"Solving the Knowledge-Value Equation." Patent Holder in artificial intelligence.
MS in Physics,
MA in Analytic Philosophy

■ **Ciju Nair**

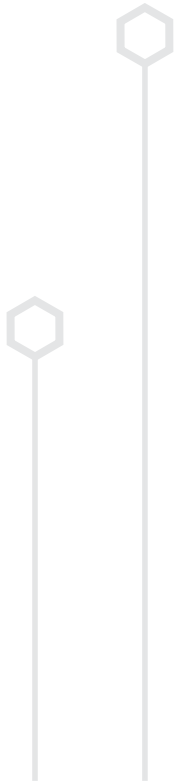
Vice President, Analytic Consulting and Innovation- Millward Brown North America with over 15 years of experience
A PhD in marketing from the Olin Business School at Washington University in St. Louis,
An MBA from Mumbai's S. P. Jain Institute of Management and Research,
A graduate degree in mechanical engineering from the Coimbatore Institute of Technology.

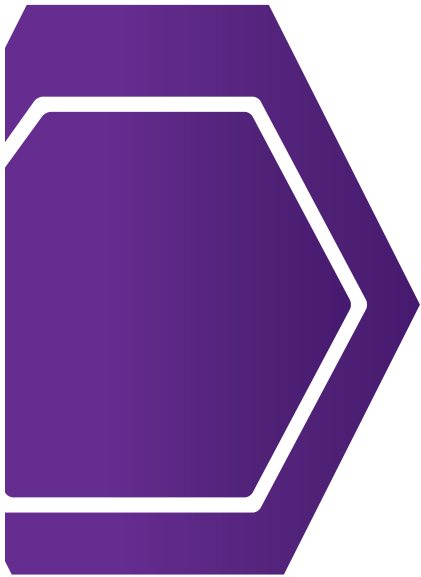
■ **Anil Chaturvedi**

Over 25 years of professional experience at companies such as AT&T Bell Labs, Kraft Foods, Capital One, and Accenture
Co-authored the book Mathematical Tools for Applied Multivariate Analysis.
PhD from Rutgers University and PGDM from the Indian Institute of Management Ahmedabad.

■ **Imran Khan**

Leadership team at AbbVie, (formerly Abbott Laboratories) Chicagoland area,
MBA with a concentration in Information Systems and Strategic Management) from the University of Illinois at Chicago.
MS in Medical Informatics from Northwestern University
BS in computer engineering from the University of Illinois.





- **Dipyaman Sanyal - Program Chair, Analytics, Bridge School of Management**
Honored as the top 10 Analytics Academician in India
Founder-CEO Dono Consulting. PhD Candidate, JNU. CFA Charter Holder, MS (Univ Texas, Dallas), MA/BA (Economics, Jadavpur University). Formerly VP and Head Quant at Sorin Capital, Sr. Research Consultant at The Blackstone Group, Research Analyst at Dow Jones, and Global Head of Real Estate Analytics and Strategy at Thomson Reuters.
- **Rahul Katyayan**
Data Scientist, BlackRock. PhD, Univ. Waterloo (Canada), Post Doc, McGill Univ (Canada), MTech (JNU).
- **Mohit Goel**
Principal Data Scientist, Naukri. PhD, Ecole Polytechnic Federale de Lausanne (Switzerland), BTech (IIT, Kgp)
- **Piyush Agrawal**
VP Marketing Analytics, SBI Cards. Formerly Sr. Manager at American Express, Consultant at ZS Associates. MBA (ISB, Hyderabad), MS (Univ Minnesota, Twin Cities), BTech (IIT, Delhi)
- **Anuj Butta**
Senior Director (Data Sciences and Analytics), Matrix Nodes; and Faculty, Analytics at NIIT University. Formerly AGM at HCL, Manager at Adobe, Senior Consultant at Sapient. Over 13 years of experience. EPBA (MISB Bocconi), EPBM (IIM, Cal), MCA (UPTU), MBA (NIMS).
- **Manit Banga**
Country Gen Manager for India and Practice Head for Predictive Analytics and Artificial Intelligence, Elevondata. Formerly, Associate Director, IBM for 11 years. Total 20 years of corporate experience. PBA (Bridge), Black Belt, PGDBM (SGRRIM).
- **Prashant Verma**
Assistant Professor (Analytics), Fortune Institute of International Business. MSc Statistics, BR Ambedkar Univ. Teaching experience of 15 years.
- **Vipul Khurana**
Associate Professor and Area Coordinator (Business Analytics) at IBS Business School. PhD (UPTU), MBA (IIT Delhi), MSc (Math, MDU). Teaching experience of over 18 years.



Bridge School Placement Services

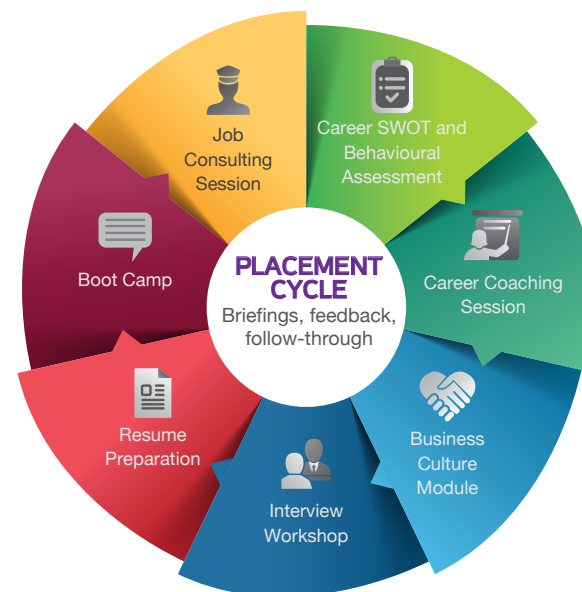
BRIDGE School transforms careers by providing comprehensive support including career coaching, interview workshops, internship preparation and identifying job opportunities.

The school is committed towards providing participants with access to the best Digital Marketing jobs. Through its extensive ties with the Industry, BRIDGE has an established network of organizations that it works with, all of which are exciting places for our analytics graduates to work in.

If a participant wishes to go through the placement process, there are intensive interview support sessions that are inclined towards the job-interview. The school focuses on understanding the aspirations of each participant and provides them with suitable opportunities. Bridge School has been maintaining a successful placement record over the years with participants bagging key roles in an array of organizations.

List of some companies where Bridge School's participants have been placed-

- Ernst & Young (E&Y)
- HomeCredit
- Mindflow Partners
- IndiGo Airlines
- Interactive Avenues, part of IPG group
- HCL Technologies Ltd.
- Eli Research
- Credforce
- Newb London
- Amex
- Dentsu
- SmartCube
- India Infrastructure Publishing
- Hindustan Times
- Shine.com
- MRKNS Associates
- Leeway Hertz
- Jubliant Agri & Consumer
- Transworld One
- Calib HR
- India Shelter Finance Corp
- Channel Play
- Luminous power
- Perfetti Van Melle India
- Bennie Bugs





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linking education to industry

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