



S P Jain
School of Global
Management

DUBAI • MUMBAI • SINGAPORE • SYDNEY

BACHELOR OF DATA SCIENCE

A young man and woman are smiling and looking at a laptop screen. The man is pointing at the screen with a blue pen. The woman is resting her chin on her hand. The background is a blurred office setting. On the right side of the image, there is a large, semi-transparent blue circle containing text. To the right of this circle, there is a network diagram consisting of a grid of dots connected by lines, resembling a molecular or data network structure.

OVERVIEW

90 percent of data in the world today has been created in the last 2 years alone. Some estimate that data production will be 44 times greater in 2020 than it was a few years ago. Others estimate that approximately 2.5 quintillion bytes of data is being generated every day. Global demand for data science and computing expertise exceeds supply, with predictions of a major shortage of analysts for at least the next 10 years. For graduates in Data Science, this presents a high potential employment opportunity.

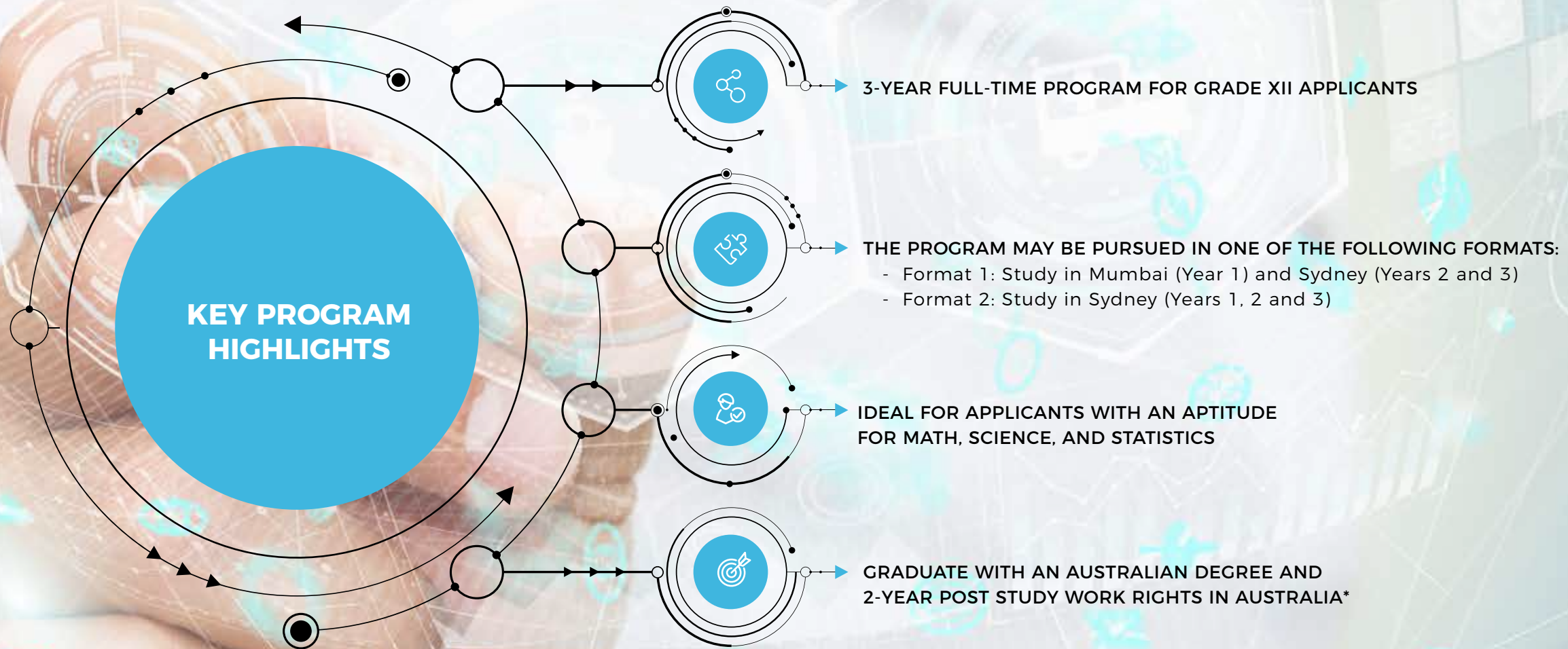
INTRODUCING S P JAIN'S BACHELOR'S PROGRAM IN DATA SCIENCE

In an increasingly digital world, Data Science plays a very big role in driving decisions, innovation, productivity and success. Big Data analytics has changed the way organisations identify trends and challenges, as well as new opportunities. This means that Big Data has the potential to bring about enormous social and economic benefits. A strategic use of Big Data will form the key basis of competition, underpinning new waves of productivity, growth, innovation and consumer surplus.

S P Jain's Bachelor of Data Science (BDS) is a 3-year course designed to prepare graduates who can conduct data-driven investigations, and conduct visual and advanced analytics by acquiring and managing data of all types. Through this course, graduates will develop an in-depth understanding of data science and the techniques for analysis of quantitative and qualitative data to arrive at solutions. They will be able to identify patterns in order to predict trends by analysing data from various sectors such as manufacturing, banking and finance, retail and healthcare.

The program is currently offered at our campuses in Mumbai and Sydney. Students can opt to spend the first year in Mumbai, and years 2 and 3 in Sydney, or spend all 3 years of the program in Sydney.





*Subject to revision as per the Australian Government's Post Study Work Arrangements.



CURRICULUM

The academic track of the program is made of a blend of core and advanced specialist subjects. Our curriculum is built on the principle that subjects get more and more specialised as you progress through the program.

The subjects undertaken in the first year of the program build a strong, general foundation in data science, math and computer science. In Year 2, mathematical and analytical topics are explored in considerable depth, and students are exposed to topics such as Data Integration, Calculus, Data Structures, Programming, Machine Learning, and Matrix Algebra and Applications. Advanced learning continues in Year 2 through topics like Simulation Modelling, Data Mining, Social Web Analytics, and Big Data Processing Techniques and Platforms.

In the final year, students also undertake applied analytics capstone projects that give them practical, hands-on experience in identifying and interpreting actionable information from raw data, and using them to make informed, mathematically valid decisions.



- Discrete Mathematics
- Mathematical Statistics
- Introduction to Computer Programming
- Introduction to Databases
- Linear Algebra
- Calculus
- Introduction to Data Science
- Statistical Data Analysis



- Advanced Calculus
- Algorithms and Data Structures
- Data Integration and Warehousing
- Visual Analytics (or Explorative Data Analysis)
- Matrix Algebra and Applications
- Programming for Analytics
- Consumer Behaviour and Marketing Research
- Machine Learning



- Simulation Modelling
- Data Mining
- Object Relational and NoSQL Databases
- Data Science Capstone Project I
- Social Web Analytics (or Web, Internet of Things, and Social Media Mining)
- Advanced Analytics (Stream, Sensor and Spatio-Temporal Analysis)
- Big Data Processing Techniques and Platforms
- Data Science Capstone Project II



INTERNSHIP

Although internships are voluntary, students are always encouraged to make good use of their summer break to gain real-time exposure to global businesses in Mumbai and Sydney. Internships present the opportunity to build a portfolio of international work experience, develop important professional attributes, put classroom learning to practice, and transform yourself into a data specialist.

FACULTY

Faculty members are the heart of any academic program. They create the conditions that bring out the best in students. SP Jain's faculty is selected on the basis of proven success and expertise. They are among the best in their respective fields - a multinational collective of recognised scholars and experts who bring a wealth of research, teaching and industry experience to the classroom.

ADITYA NARVEKAR

MS Computer Science (Drexel University, USA);
MBA (NYU Stern, USA)
Areas of Expertise: Python Programming,
Financial Analytics

DEBASHIS GUHA

BTech (IIT Kharagpur, India); PhD (Columbia
University, USA)
Areas of Expertise: Machine Intelligence and Deep
Learning

N SARALA

MS Computer Science (SNDT University, India)
Areas of Expertise: Databases, Web Development and
Visual Analytics

PRASAD PATIL

MS (State University of New York, USA)
Area of Expertise: Applied Statistics

AK CHAKRABORTY

BStat, MStat (ISI Calcutta, India); PhD (IISc
Bangalore, India)
Areas of Expertise: Statistics and Statistical
Machine Learning

JOSEPH KONSTAN

(Distinguished Visiting Faculty)
AB (Harvard University, USA); PhD (UC Berkeley, USA)
Areas of Expertise: Recommender Systems and HCI

NARASIMHA KARUMANCHI

(Distinguished Faculty)
MS (IIT Bombay, India)
Areas of Expertise: DevOps, Data Structures and
Algorithm

SUNIL D LAKDAWALA

MS (IIT Bombay, India); PhD (Yale University, USA)
Areas of Expertise: Data Warehousing, Data Mining

ARUN CHATTERJEE

PhD (IIM Bangalore, India)
Area of Expertise: Business Analytics

LAWRENCE POHLMAN

(Distinguished Visiting Faculty)
PhD (Columbia University, USA)
Areas of Expertise: Mathematics, Algorithmic and
Quantitative Finance

NAVNIT BELUR

MS Computer Science (Georgia Institute of
Technology, USA)
Area of Expertise: Data Science in Python

SUCHISMITA DAS

PhD (Indian Institute of Science Education and Research,
India);
MS (IIT Kharagpur, India)
Areas of Expertise: Mathematics and Statistics

ASHOKA CHAUDHURI

MS, MPhil
Areas of Expertise: Mathematics and Applied
Mathematics

MADDULETY KOILAKUNTLA

PhD in ISO 9000 & QS 9000 Quality Systems
Areas of Expertise: Statistics and Operations Research

NITIN SHARMA

MS Computer Science (University of Mumbai,
India)
Areas of Expertise: Cloud and Big Data

SWAGOTO CHATTERJEE

(Visiting Faculty)
PhD (IIM Bangalore, India); BTech (IIT Kharagpur, India)
Area of Expertise: Business Analytics

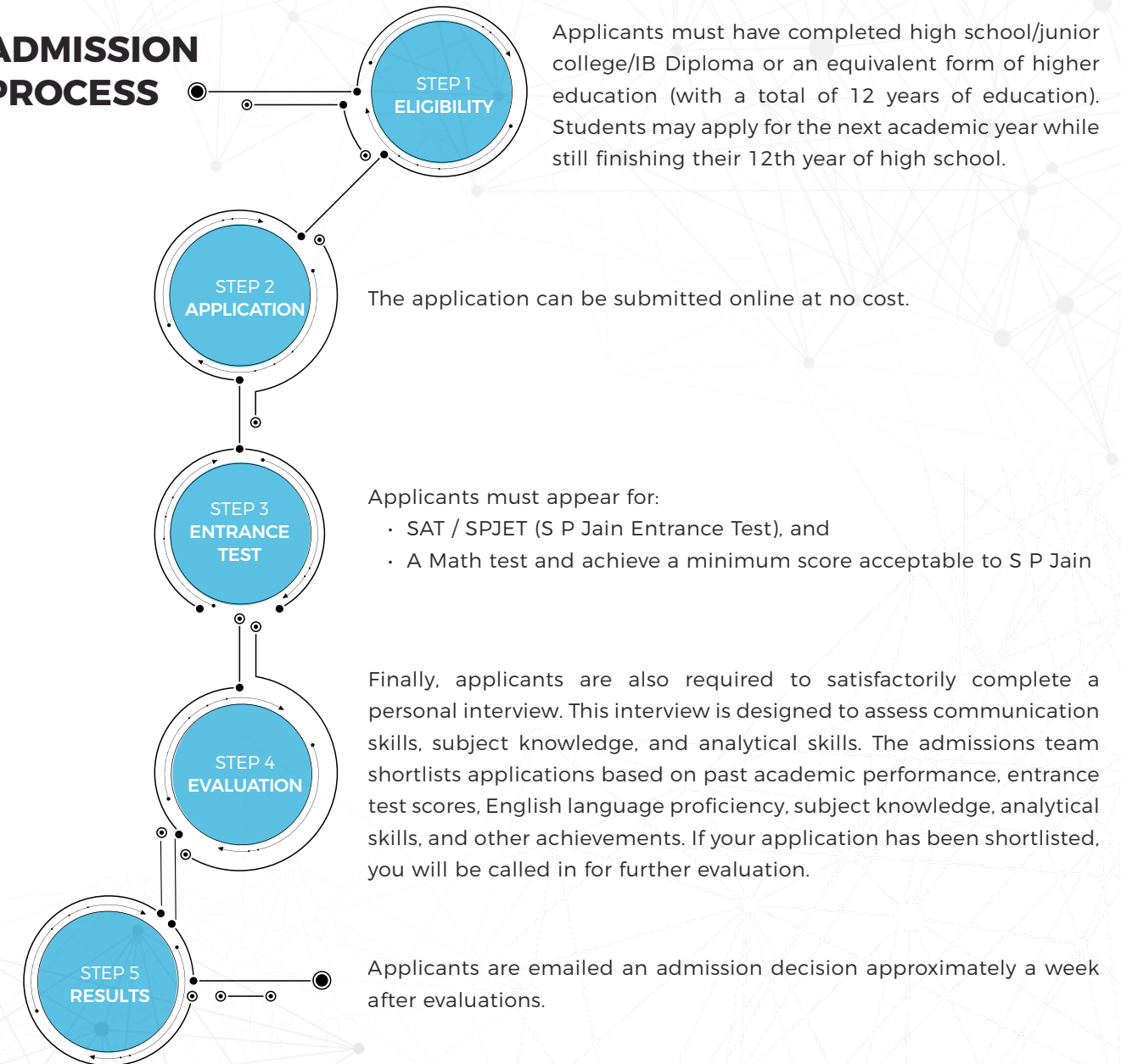




CAREERS

The program equips students to fill the need for data expertise in practically every field imaginable – from IT, Consulting and BFSI to Healthcare, Education, Retail, and Media. Data Science graduates will be well positioned for careers in data mining, data modelling, data architecture, extraction, transformation, loading development and business intelligence development, and for roles like Data Scientists, Analysts, Developers, and Consultants.

ADMISSION PROCESS





S P Jain School of Global Management is a top-ranked Australian business school with campuses in Dubai, Mumbai, Singapore, and Sydney. We relentlessly strive to reimagine business education and offer innovative courses in world-class cities. Our efforts have been recognised by highly regarded global rankings that include:

TOP 15 IN THE WORLD

Forbes
Best International 1-year MBAs
(2019-21)

TOP 20 IN THE WORLD

Forbes
Best International 1-year MBAs
(2017-19)

TOP 100 IN THE WORLD

The Economist
Full-time MBA Rankings
(2015)

TOP 20 IN THE WORLD

Forbes
Best International 1-year MBAs
(2013-15)

#4 in the world

Times Higher Education -
Wall Street Journal
1-year MBA Rankings (2018-19)

TOP 10 IN THE WORLD

Forbes
Best International 1-year MBAs
(2015-17)

#1 IN DUBAI

Global Brands, UK
(2015)

TOP 100 IN THE WORLD

Financial Times
Global MBA Programs
(2011 & 2012)

SINGAPORE

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MUMBAI

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