CHRIST
(DEEMED TO BE UNIVERSITY)
PUNE LAVASA CAMPUS
The Hub of Analytics

Post Graduate Diploma in

DATA SCIENCE & BIG DATA ANALYTICS

Duration: 1 Year

Industry Partners and Certifications

Microsoft CERTIFIED ASSOCIATE · SAS CERTIFIED · tableau CERTIFIED ASSOCIATE Consultant PARTNER CERTIFICATION · Google Certified · EDUEDGE PRO

CHRIST (Deemed to be University) Pune Lavasa Campus - 'The Hub of Analytics'
Toll-free: 1800 123 2009

One of the first institutions in India to be accredited in 1998 by the NAAC, and subsequently in 2004 and 2016, CHRIST University has the top grade 'A' in the 4-point scale. It has consistently ranked among the top ten for UG courses in surveys done by the India Today group, having specialized program offerings across Data Science, Analytics, Capital Markets, and FinTech.

The multi-disciplinary University which focuses on teaching research and service offers Bachelors to Doctoral programs in Humanities, Social sciences, Science, Commerce, Management, Engineering, Education, and Law to over 25000 students.

United Nations Academic Impact (UNAI) membership has added Christ University to the UNAI team of 1470 institutions in 146 countries, who are working with the United Nations to promote global priorities, including peace, human rights, and sustainable development.

PROGRAM
PARTNERS

EDUEDGE PRO
GLOBAL EDTECH INSTITUTION
FINTECH | ANALYTICS | INVESTMENT BANKING | CAPITAL MARKETS

EDUEDGE PRO is an EdTech initiative, founded by Mr. Harjeet Singh, a Stanford Alumnus and Financial Mathematician.

EduEdge Pro provides Skill Development and Skill Enhancement education in specialized domains within BFSI, Data Science, Analytics, FinTech, Capital Markets and Algorithmic Trading in order to bridge the gap between academia training and industry needs and to provide Upskilling.

EduEdge Pro conducts corporate training programs for leading global investment banks, asset management firms, financial institutions, exchanges and brokerage houses.

It works with leading educational institutions and universities in providing end-to-end solutions such as Centre of Excellence, Financial Research Lab and Specialization Curriculum Tracks.
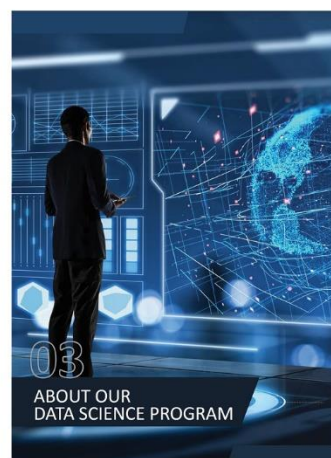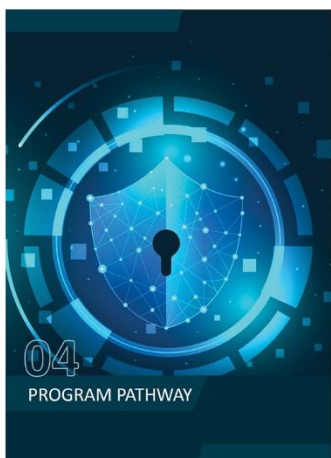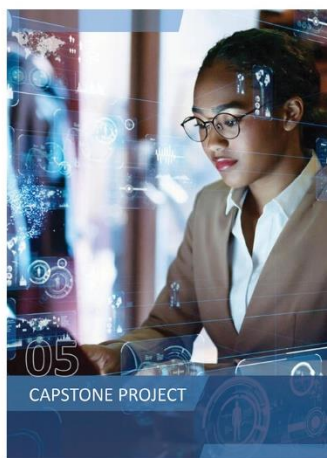
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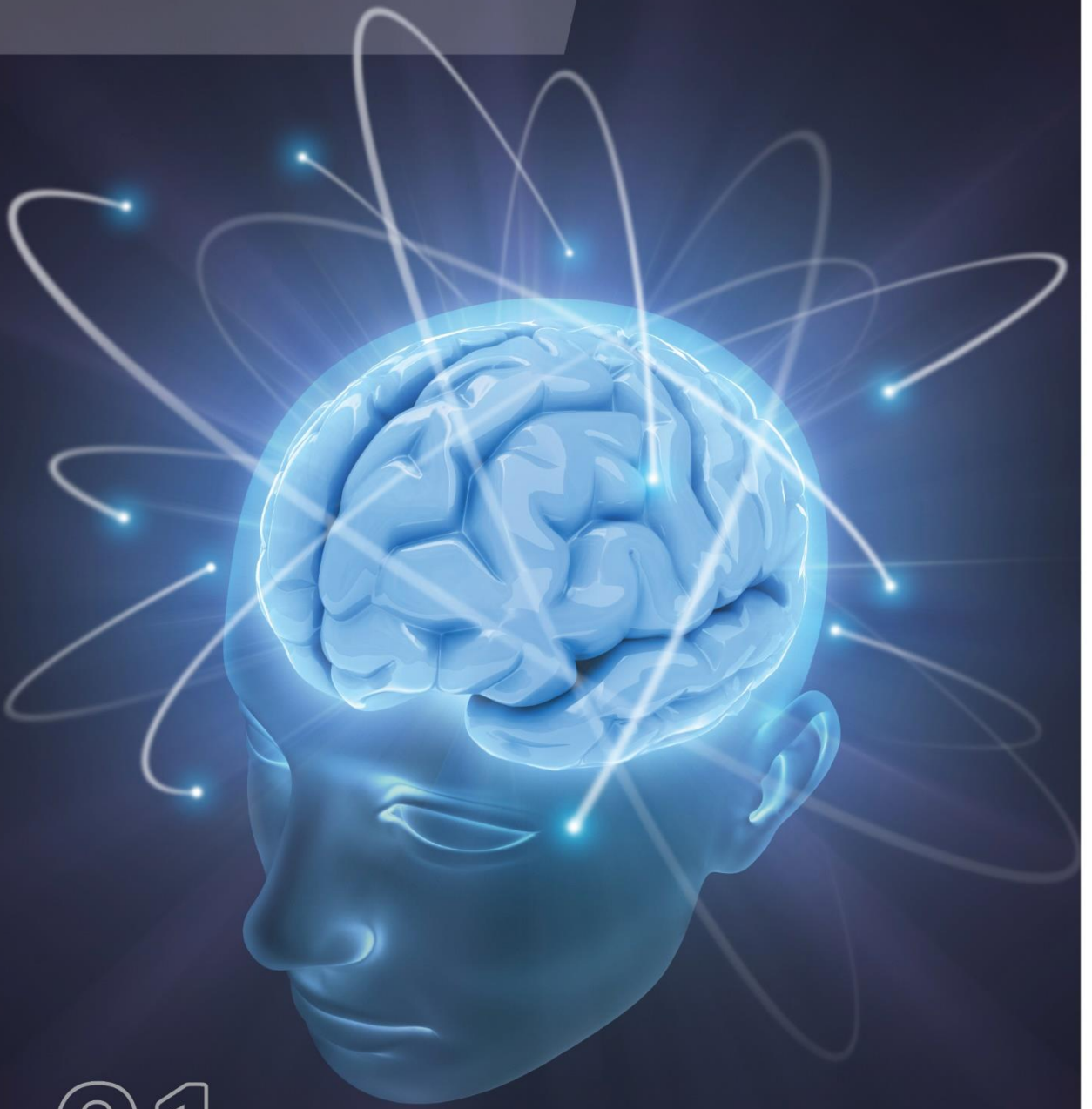
WHY DATA SCIENCE & BIG DATA
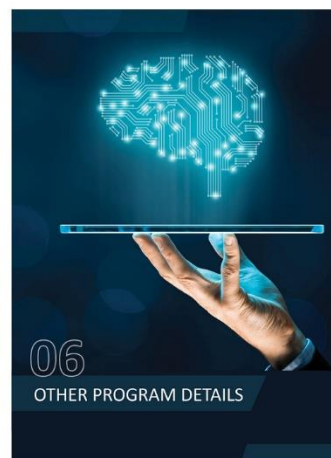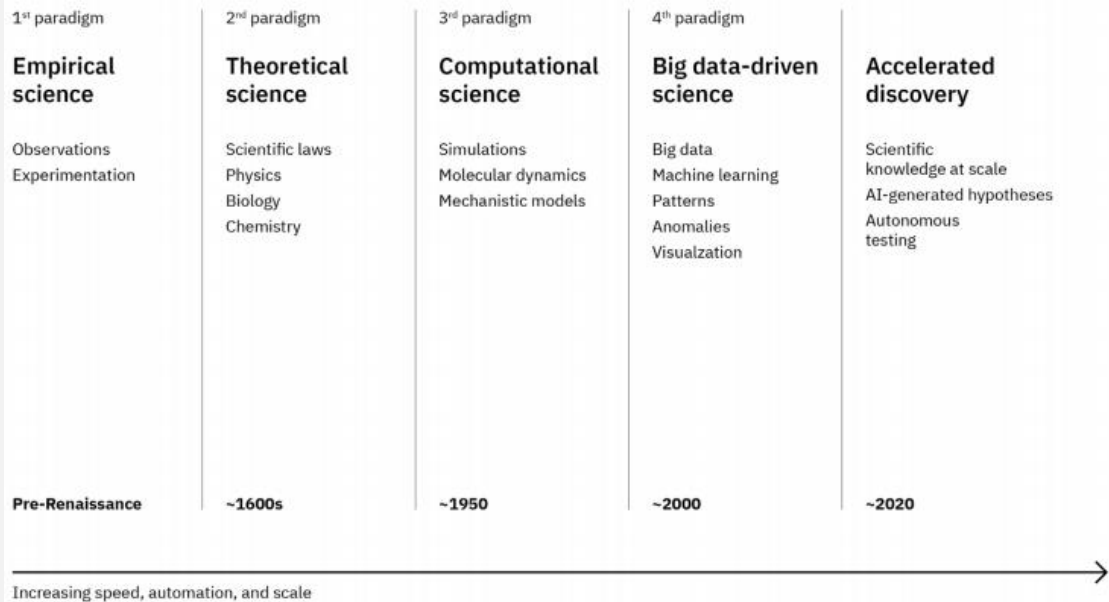
Paradigm Shift

The Industry expects a global shift in paradigm towards AI-driven and automated technologies through 4th generation technology leap involving Machine Learning, Big Data Science and Cloud Analytics

1st paradigm	2nd paradigm	3rd paradigm	4th paradigm	
Empirical science	**Theoretical science**	**Computational science**	**Big data-driven science**	**Accelerated discovery**
Observations Experimentation	Scientific laws Physics Biology Chemistry	Simulations Molecular dynamics Mechanistic models	Big data Machine learning Patterns Anomalies Visualzation	Scientific knowledge at scale AI-generated hypotheses Autonomous testing
Pre-Renaissance	~1600s	~1950	~2000	~2020

Increasing speed, automation, and scale

Where is Data Science used

Data Science has applications across every business domain.

The diagram below illustrates a typical Data Science Business Map for an organization, where Data Science is now indispensable with respect to its Marketing, Finance, Supply Chain, Social Media, Customer Services, Strategy, Logistics and Support divisions
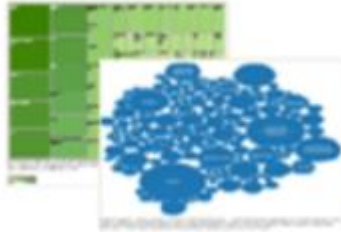
DATA SCIENCE

MARKETING & E-COMMERCE

Revenue and Margin Forecasting
Demand Forecasting
Cross-selling algorithms
Predictive Modelling
Customer Segmentation
Social Media Analytics

FINANCE & BANKING

Strategic Decision Making
Portfolio Analytics
Risk Analytics
Fraud Detection
Credit Card default forecasting

Some Applications

Data Science and Analytics are all pervasive. However, a few examples for specific applications within important domains as shown
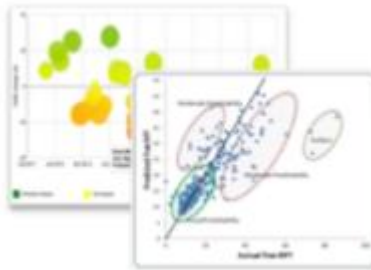
MANUFACTURING & SUPPLY CHAIN

Performance and Defect Tracking
Automation of Manufacturing units
Energy and fuel Optimization
Supply Chain Optimization
Transport Monitoring system

HEALTHCARE & PHARMA

Medical History Analysis
Drug Discovery
Virtual Assistant
Medical Image Analysis
Bioinformatics

INDUSTRY SCOPE
DATA SCIENCE
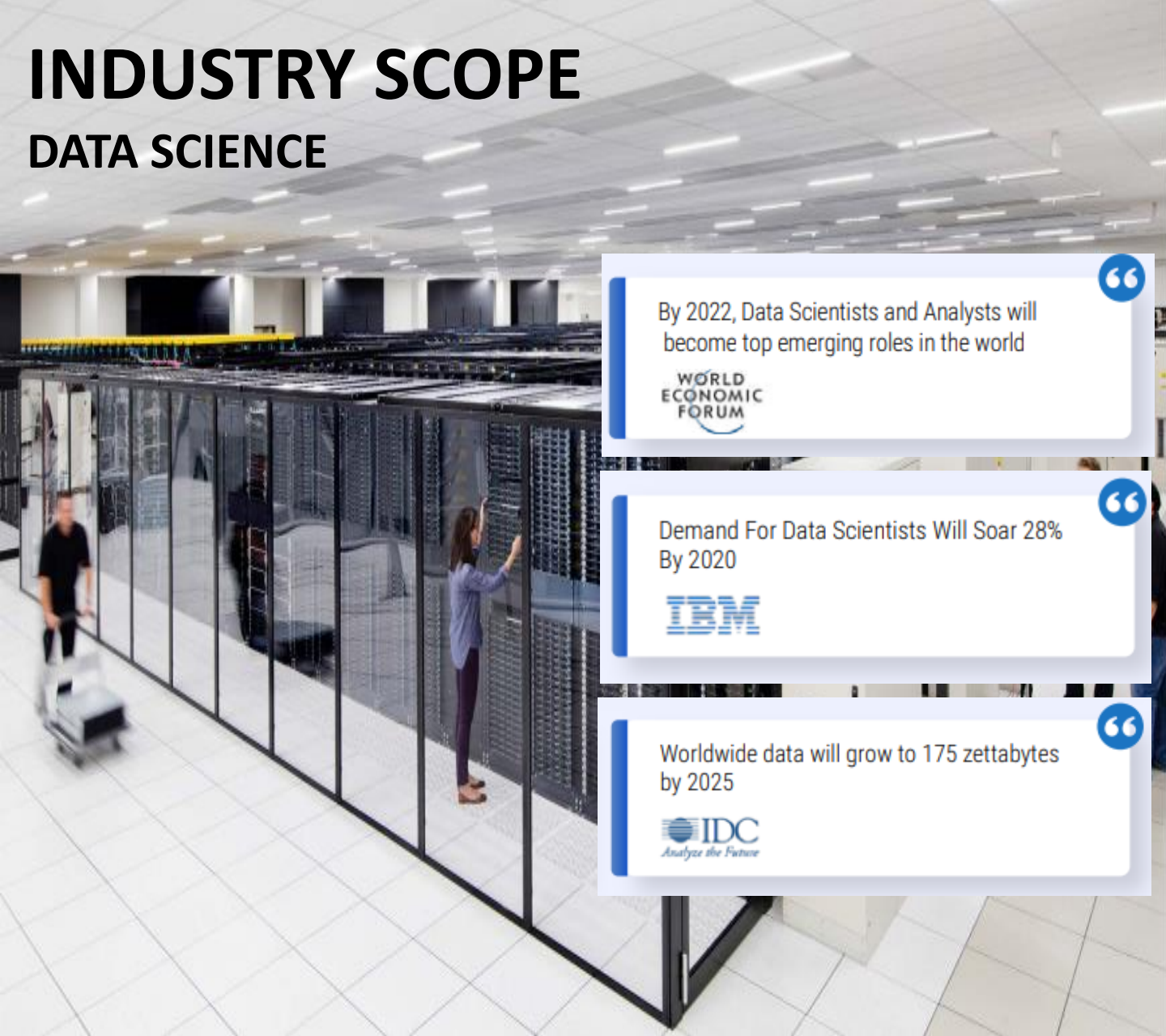
> By 2022, Data Scientists and Analysts will become top emerging roles in the world
>
> WORLD ECONOMIC FORUM

> Demand For Data Scientists Will Soar 28% By 2020
>
> IBM

> Worldwide data will grow to 175 zettabytes by 2025
>
> IDC Analyze the Future

Value of ML market
USD 7.3 billion In 2019-20, size of the global Machine Learning market

Job potential in AI-ML
2.5+ million Jobs in Machine Learning and Artificial Intelligence in 2021, according to a Gartner report

Estimated Value of ML market
USD 31 billion Estimated value of the Global Machine Learning market by 2024

Expected Employment Growth Rate
82% Expected Annual Employment Growth Rate for AI & ML engineers between 2018-2023

INDUSTRY LEADERS
SPEAK

'Artificial intelligence is the science and engineering of making intelligent machines, especially intelligent computer programs.' – John McCarthy, father of AI

Mukesh Ambani
MD, Reliance Industries

"The entire nation is ready to implement an agenda that will promote AI for a strong, sustainable and equitable new India."

Elon Musk
Founder-CEO, Tesla

"We can save and replay memories. The future is going to be weird. All is a game of AI and Data Science"
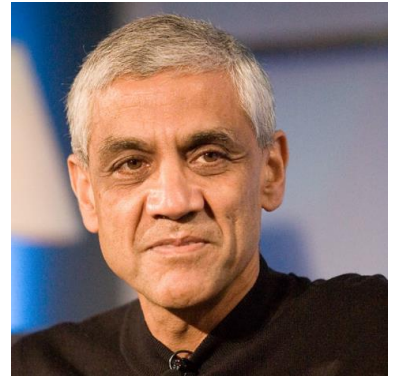
Vinod Khosla
Founder, Sun Microsystems

"Big data will replace the need for 80% of all doctors."

02

SKILLS REQUIREMENT &
JOBS IN DATA SCIENCE

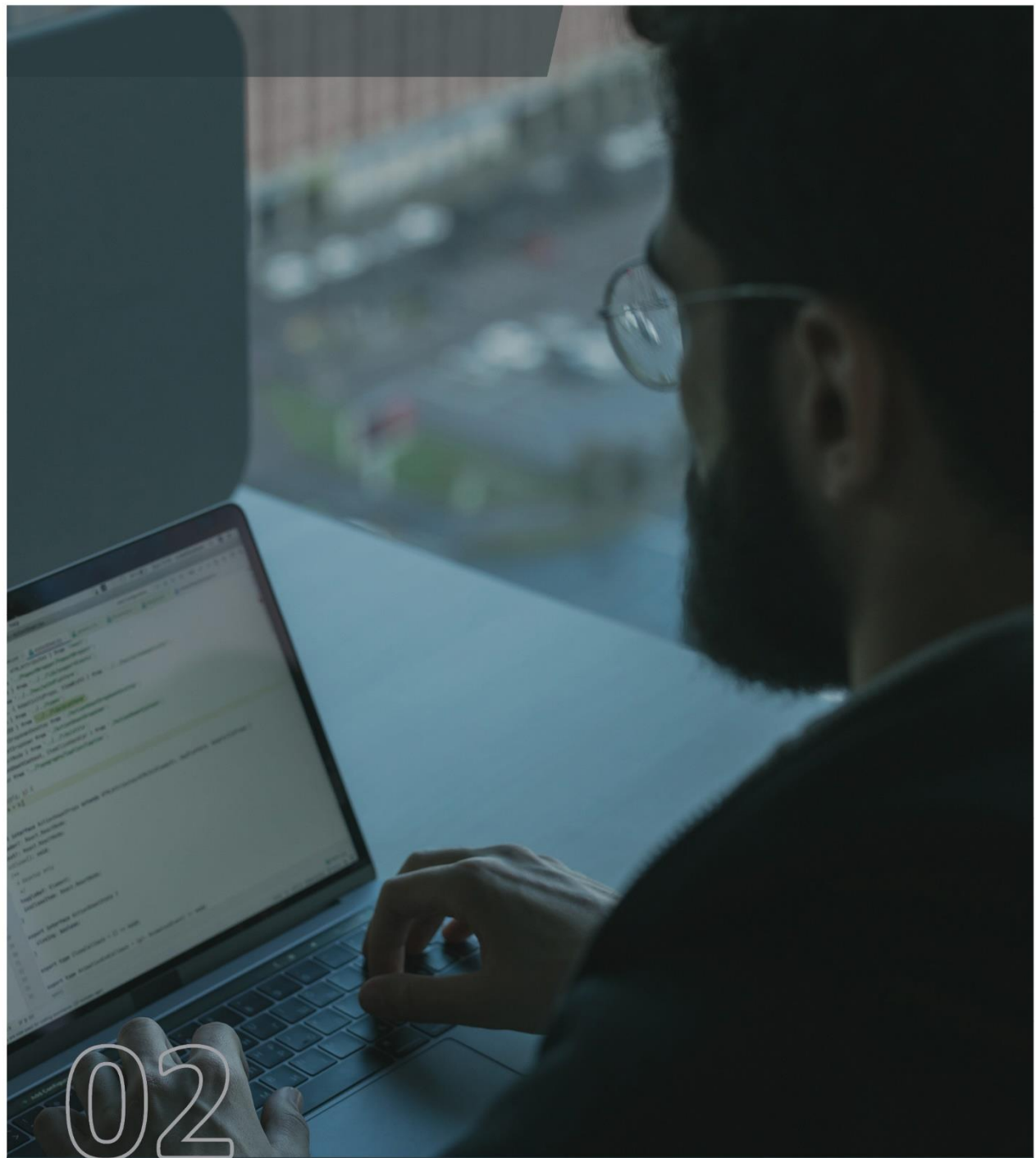| FRAMEWORK	FUNCTIONAL ROLE	SAMPLE OCCUPATIONS
Data Scientists and Advanced Analysts	Create sophisticated analytical models used to build new datasets and derive new insights from data	Data Scientist Economist Data Engineer Biostatistician Statistician Financial Quantitative Analyst
Data Analysts	Leverage data analysis and modelling techniques to solve problems and glean insight across functional domains	Data Analyst Business Intelligence Analyst
Data Systems Developers	Design, build and maintain an organisation's data and analytical infrastructure	Systems Analyst Database Administrator
Analytics Managers	Oversee analytical operations and communicate insights to executives	Chief Analytics Officer Marketing Analytics Manager
Functional Analysts	Utilise data and analytical models to inform specific functions and business decisions	Business Analyst Financial Analyst
Data-Driven Decision Makers	Leverage data to inform strategic and operational decisions	IT Project Manager Marketing Manager

ANALYTICAL RIGOUR

Framework categories showing increasing levels of analytical rigor across all Data Science and Analytics (DSA) jobs

© PhotoAlto/Odilon Dimier/Getty Images

JOBS
DATA SCIENCE

AI-ML Engineer Salaries across different cities in India:
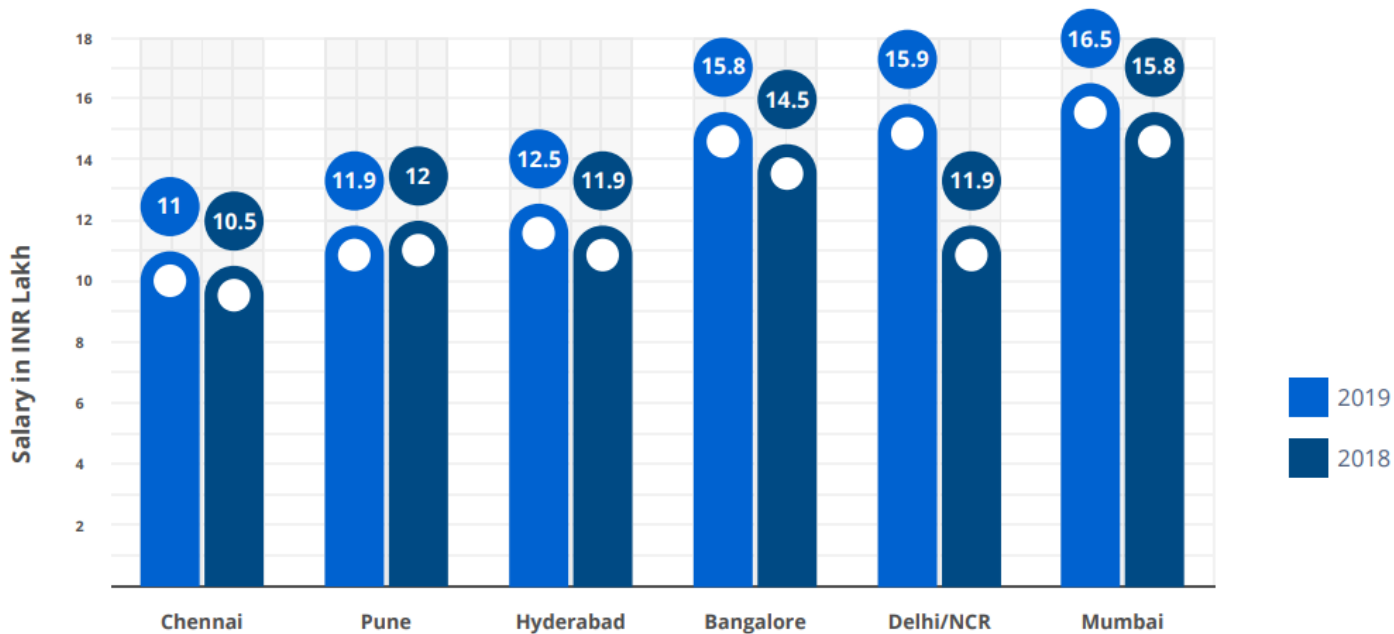
Source - Analytics India Magazine

AI-ML Engineer (0-4 yrears experience) salaries across major Indian cities

SKILLS

**REQUIREMENT IN
DATA SCIENCE**

Analytics	R/SAS	necessary
Coding	R, Python, Java, C/C++	necessary
Databases	SQL, NoSQL (MongoDB, CouchDB, Cassandra, MemcacheDB, etc.)	necessary
Big Data Processing	Hadoop, Spark, Flink	preferred
Algorithms and Models	Regression models, Hidden Markov models, Support Vector Machines, Dimensionality Reduction algorithms, Ensemble algorithms, Decision Trees, Clustering	necessary
Frameworks and Libraries	TensorFlow, Theano, CNTK, scikit-learn, Caffe, Spark MLlib, etc.	preferred
Domain knowledge	Understanding of company goals, industry fundamentals, business problems, finding new ways to leverage data	preferred
Other	Intellectual curiosity, communication and presentation skills	preferred

SKILLS

REQUIREMENT IN DATA SCIENCE

Top 10 skills listed in Data Science and Advanced Analyst job adverts on top recruitment platforms, according to the Royal Society report

Rank	Skill	Number of DSAA job adverts requiring this skill		Percentage of DSAA job adverts requiring this skill	
		2013*	2017 – 18**	2013	2017 – 18
1	Data Science	738	11,989	9%	44%
2	Python	681	11,647	8%	43%
3	SQL	1,048	7,226	13%	27%
4	Machine Learning	352	7,089	4%	26%
5	Big Data	566	6,770	7%	25%
6	Research	2,042	5,279	25%	20%
7	Apache Hadoop	533	5,199	7%	19%
8	Communication Skills	1,843	4,849	23%	18%
9	Java	703	4,111	9%	15%
10	Scala	58	3,276	1%	12%

*8,157 job adverts included in this analysis. **27,033 job adverts included in this analysis.

Skills Proficiency Matrix

Below matrix shows the Data Science skills proficiency, by industry and region

Proficiency (0–1, where 1 is best in class)

Asia Pacific · Europe · Latin America · Middle East and Africa · North America

Source: Coursera.
Note: Regional data points might be excluded in cases where the data is inconclusive.

Skills proficiency matrix shows pronounced skills gaps across industry sectors for Asia Pacific vs developed markets, and hence the acute need to upskill

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03

ABOUT OUR
DATA SCIENCE PROGRAMME
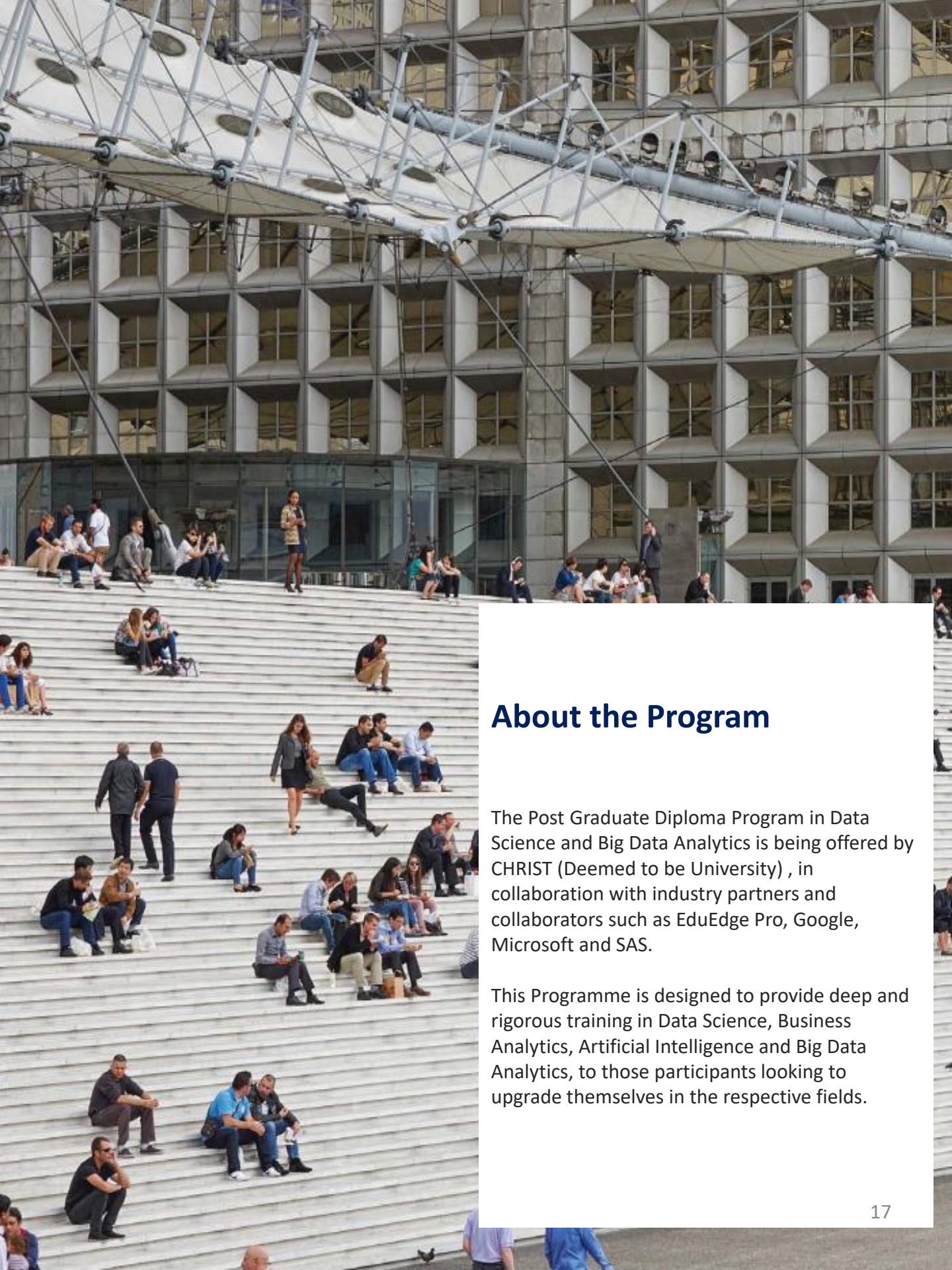
About the Program

The Post Graduate Diploma Program in Data Science and Big Data Analytics is being offered by CHRIST (Deemed to be University) , in collaboration with industry partners and collaborators such as EduEdge Pro, Google, Microsoft and SAS.

This Programme is designed to provide deep and rigorous training in Data Science, Business Analytics, Artificial Intelligence and Big Data Analytics, to those participants looking to upgrade themselves in the respective fields.

Program Coverage
This PG Diploma will help you learn applications of Data Science and Big Data Analytics applied to important domain areas such as Financial Analytics, Marketing Analytics and Social Media Analytics.

Industry-oriented curriculum
Industry focused curriculum offered in a flexible online blended interactive format that works for busy professionals.

12-month Weekend Programme
The Programme would be offered on the weekends to enable optimal learning to those participants who are working in the Industry.

Blended Learning
The Programme would offer an optimal blended mix of on-campus bootcamp sessions, online sessions, self-paced sessions to maximize learning.

Capstone Project
The Capstone Project gives you the opportunity to apply Predictive Modeling tools to make data-driven decisions in order to solve real business challenges.

Industry Partners
Our industry partners would provide you the appropriate domain and industry expertise to tackle Data Science challenges in the real world.

Careers and Placement help
Our program would fast track your career progression in Data Science through our dedicated Placement Assistance and Industry Networking.

450+	Teaching & Practice Hours
300+	Learning Hours
10+	Data Science Platforms and Tools you will learn
24x7	Access to Learning Management System with fully recorded videos
25+	Learn from Industry Leaders, Domain professionals and Academic experts
50+	Personal Mentoring Hours for Industry readiness
20+	Capstone Projects to choose from

Accelerate your career with industry-ready Machine Learning and Data Science skills

You will learn applied examples, use cases from….

Predictive Modelling	Machine Learning	Big Data	Neural Network	Statistical Modelling	Marketing Analytics	Financial Analytics	Social Media Analytics
Data Mining	NLP	Artificial Intelligence	Sentiment Analysis	Data Visualization	Deep Learning	Consumer Analytics	Supply Chain Analytics
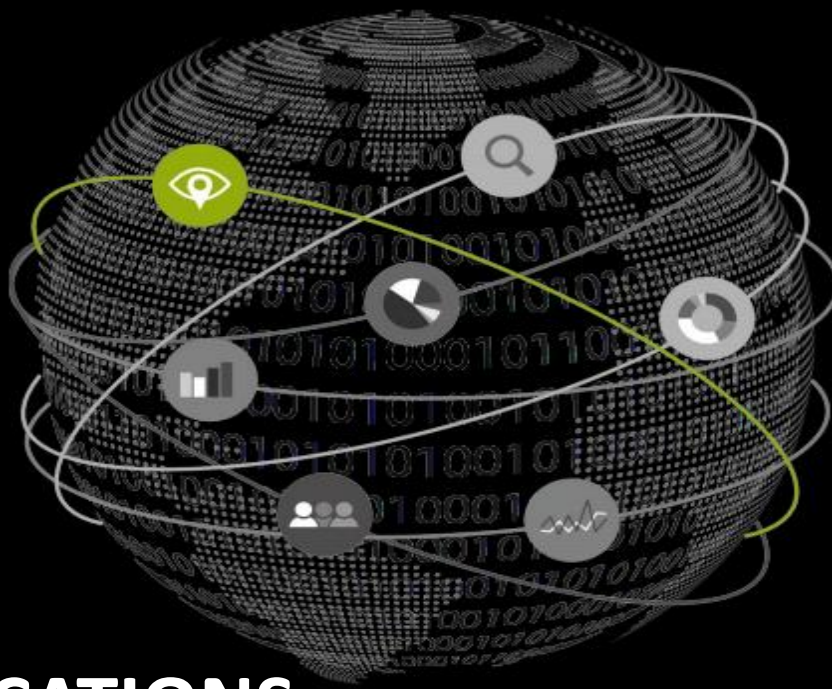
INDUSTRY
CERTIFICATIONS

SAS Certified Data Scientist

For individuals who want to analyze big data with a variety of statistical analysis and predictive modeling techniques.

Successful candidates should have experience in the following areas:
Machine Learning and predictive modeling techniques.
Application of Machine Learning and predictive modeling techniques to big, distributed and in-memory data sets.

- Pattern detection.
- Experimentation in business.
- Optimization techniques.
- Time series forecasting.

Tableau Desktop Certified Specialist

This exam is for those who have foundational skills and understanding of Tableau Desktop and at least three months of applying this understanding in the product.

Tableau Certification Will Be Relevant in Business Intelligence and Visualization. All-Inclusive Bundle To Help You Amplify Your Skills and Get Certified.

Become an expert in Data Analysis. Business Analytics. Business Dashboards. Data Visualization. Drag & Drop Reporting. Data Discovery.
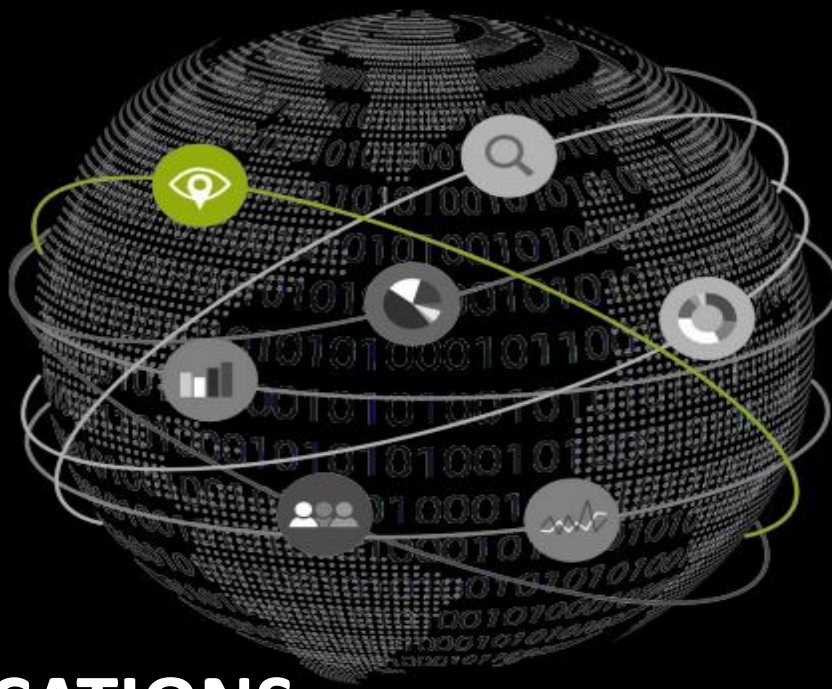
INDUSTRY
CERTIFICATIONS

Microsoft Certified: Data Scientist Associate

This course is designed for data scientists with existing knowledge of Python and Machine Learning frameworks like Scikit-Learn, PyTorch, and Tensorflow, who want to build and operate Machine Learning solutions in the cloud.

Learn how to operate Machine Learning solutions at cloud scale using Azure Machine Learning. This course teaches you to leverage your existing knowledge of Python and Machine Learning to manage data ingestion and preparation, model training and deployment, and Machine Learning solution monitoring in Microsoft Azure.

Google Data Analytics Professional Certificate

Get started in the high-growth field of data analytics with a professional certificate from Google. Learn job-ready skills that are in demand, like how to analyze and process data to gain key business insights.

Data analysts prepare, process, and analyze data to help informed business decisions. They create visualizations to share their findings with stakeholders and provide recommendations driven by data.

Get a job in data analytics, with help from Google, learn the foundations of data analytics, and get the job-ready skills you need to kick-start your career in a fast-growing field.

python	Jupyter	pandas	SciPy	matplotlib	+tableau
Spark	R	NumPy	MATLAB	SQL	Datawrapper
PyTorch	sas	PANDAS PROFILING	Scikit learn	WEKA The University of Waikato	Power BI

BIG DATA
PLATFORMS
YOU WILL LEARN

KNIME · data iku · Map Reduce · SAS CERTIFIED · APACHE hadoop · solver

rapidminer · NODEXL · OpenRefine · AWS Glue · TensorFlow · MAPR TECHNOLOGIES

04

PROGRAMME PATHWAY

PROGRAMMING ESSENTIALS AND VISUALIZATION FOR DATA SCIENCE

1

APPLIED STATISTICS FOR DATA SCIENCE USING R/PYTHON

2

MACHINE LEARNING AND PREDICTIVE MODELLING FOR DATA SCIENCE

Microsoft CERTIFIED
ASSOCIATE
★★

3

APPLIED BUSINESS ANALYTICS

+ableau
CERTIFIED
ASSOCIATE
Consultant
PARTNER CERTIFICATION

4

APPLIED BIG DATA ANALYTICS

Ssas.
CERTIFIED

Google
Certified Professional

5

CERTIFICATIONS
ROADMAP

OPTION 1
Each certification above is treated as standalone. You can pursue 1 or more certifications

OPTION 2
Successful completion of all 5 above certifications leads to an award of the PG Diploma certificate

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PROGRAMMING ESSENTIALS AND VISUALIZATION FOR DATA SCIENCE

1

PYTHON ESSENTIALS

Module 1
Introduction to Python IDE's, Concept of Packages, Data Types & Data Data Types & Data objects, Basic Operations, Control flow & Control flow & conditional statements, Python Built-in Functions

DATA CLEANING

Module 2
Sub Setting / Filtering / Slicing Data, Using indexing, Using functions, Mutation of table, Binning data, Renaming columns or rows, Type conversions, Setting index, Handling duplicates /missing/Outliers, Creating dummies from categorical data, Data manipulation tools

DATA SCIENCE OPERATIONS

Module 3
What is NumPy?, Overview of functions & methods in NumPy, Data structures in NumPy, Creating arrays and initializing, Reading arrays, Slicing and indexing, Combining arrays, What are pandas, Pandas Data Structures (Series & Data Frames), Functions & methods,

DATA VISUALIZATION

Module 4
Introduction to Matplotlib, Basic Plotting with Matplotlib, Line Plots. Simple to complex visualizations Advanced Visualization Tools

DATA SCRAPPING, WRANGLING

Module 5
Data Scrapping, Finding data across sources, Querying an API directly Stocks, Weathers etc., Browser-based Scrapping, Scrapping tables such as Wikipedia/IMDB, Data Wrangling, Integrating data

Learn Platforms

python   NumPy   ggplot2   plotly

pandas   jupyter   SciPy   matplotlib   26

APPLIED STATISTICS FOR DATA SCIENCE USING R/PYTHON

2

STATISTICS PRIMER

STATISTICAL METHODS, HYPOTHESIS TESTING

STATISTICAL DATA ANALYSIS

APPLIED ECONOMETRICS USING PYTHON

Module 6
Measures of central tendencies, Measures of variance, Measures variance, Measures of frequency, Measures of Rank, Basics of Rank, Basics of Probability, distributions, Conditional Probability Conditional Probability (Bayes Theorem)

Module 7
Descriptive vs. Inferential Statistics, Discrete & Continuous distributions, Concept of Sampling & types of Sampling, Hypothesis Testing and Applications, Statistical Methods – Z/t-tests (One sample, independent, paired), ANOVA, Correlation and Chi- square

Module 8
Exploratory data analysis, Descriptive statistics, Frequency Tables and summarization, Uni-variate Analysis (Distribution of data & Graphical Analysis), Bi-Variate Analysis(Cross Tabs, Distributions & Relationships, Graphical Analysis)

Module 9
Working with Financial Datasets and Time series, Webscrapping financial information using Python, Performing regression, PCA application for multivariate financial datasets, Forecasting models using GARCH, Financial Time Series models

Learn Platforms

R   python   jupyter   MATLAB

MACHINE LEARNING & PREDICTIVE MODELLING FOR DATA SCIENCE

3

INTRODUCTION TO PREDICTIVE MODELLING

Module 10
Concept of model in analytics and how it is used, Common terminology used in modeling process, Types of Business problems – Mapping of Algorithms, Different Algorithms, Different Phases of Predictive Modeling, Data Modeling, Data Exploration for modeling, Exploring the data and identifying any problems with the data, Identify missing/Outliers in the data, Visualize the data, Visualize the data trends and patterns

SUPERVISED LEARNING REGRESSION PROBLEM

Module 11
Linear Regression, Polynomial Regression, Multivariate Regression, Support Vector Machines, Ridge Regression, Lasso Regression, Problems with Regression

CLASSIFICATION PROBLEMS

Module 12
Logistic Regression, K-Nearest Neighbor, Naïve Bayes Classifier, Decision Trees, Ensemble Learning – Bagging, Random Forest, Adaboost, Gradient Boost, XGBoost, Support Vector Classifier

NEURAL NETWORKS

Module 13
Multi Layer Perceptrons, Convolutional Neural Networks, Recurrent Neural Network, Auto Encoder, Generative Adversarial Network, Graph Neural Networks, Applications

Learn Platforms

APPLIED BUSINESS ANALYTICS

4

APPLIED MARKETING ANALYTICS

APPLIED FINANCIAL ANALYTICS

SOCIAL MEDIA ANALYTICS

BUSINESS INTELLIGENCE AND DASHBOARDING

Module 14
You will learn how to analyze Marketing campaigns with Python. campaigns with Python. You will learn how to analyze Social analyze Social media data in Python. You will perform advanced perform advanced Marketing analytics such as Market Basket Market Basket Analysis using Python, Customer Segmentation Segmentation Analysis, Customer Analytics and Customer Churn Customer Churn Analytics.

Module 15
You will learn how to working with open-source Financial Datasets and Time series. You will learn how to web-scrape historical time series, fundamental data using Python You would learn Portfolio Modeling with Python, Portfolio Optimization, Portfolio Analytics using Python, Risk Analytics, Value at Risk (VaR) calculations, Monte Carlo Simulations for Portfolio Modeling, Simulating using Python.

Module 16
Learn to analyse the unstructured textual data to derive meaningful insights. – Text Mining and Natural Language Processing (NLP). Word Clouds, Sentiment Analysis, Semantic network, Clustering, Extract user reviews of the product/services from Amazon, Snapdeal and trip advisor, Install Libraries from Shell, Extraction and text analytics in Python, LDA / Latent Dirichlet Allocation, Topic Modelling, Sentiment Extraction, Lexicons & Emotion Mining

Module 17
This module will introduce you to Business Intelligence Reporting and Dashboarding using Power BI Desktop. You will know how to extract data from various sources and establish connections with Power BI Desktop, perform transformation operations on data and the Role of Query Editor in Power BI. Finally, you will learn to work with complex databases, report elements and build end-to-end industry styled Dashboards.

Learn Platforms

APPLIED BIG DATA ANALYTICS

5

BIG DATA PRIMER

Module 18
What is Big Data, Big data in marketing, analytics, retail, hospitality, retail, hospitality, consumer good, defense etc., Technologies for Technologies for Handling Big Data, Introduction to Hadoop, to Hadoop, Functioning of Hadoop, Cloud computing (features, advantages, applications) applications)

BIG DATA STORAGE AND PROCESSING

Module 19
Big Data storage systems, Relational Databases, NoSQL Databases: HBase, Graph DB, Distributed File Systems/HDFS, Cloud storage. Introduction to Big Data processing platforms – Data Volume: Hadoop, Spark, Data Velocity: Storm, Complex Event Processing, Cloud platforms

DATA ENGINEERING

Module 20
Hadoop And MapReduce Programming, Data Management And Relational Database Modelling, NOSQL Databases And Apache HBase, Data Warehousing, Data Ingestion With Apache Sqoop And Apache Flume, Building And Querying Data Warehouse With Apache Hive.

BUSINESS USE-CASES IN BIG DATA

Module 21
Applied Case Studies to different domains and areas such as Social Media, Marketing Analytics, Financial Analytics, Supply Chain, HR Analytics, Google Analytics

Learn Platforms

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05

CAPSTONE PROJECT

CAPSTONE
PROJECT

Predictive Modelling

Artificial Intelligence

Neural Network

Data Mining
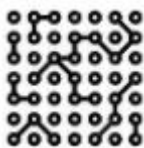
Big Data Analytics

Machine Learning

WHAT IS IT

The Capstone Project gives you the opportunity to apply what you've learned about how to make data-driven decisions to a real business challenge faced by businesses.

OBJECTIVES

At the end of this Capstone, you'll be able to ask the right questions of the data and know how to use different models and algorithms effectively to address optimization challenges.

INDUSTRY CONNECT

Designed with Analytics companies to give you invaluable experience in evaluating and creating data-driven decisions, the Capstone Project provides the chance for you to devise a plan of action for analyzing data and modeling algorithms itself to provide key insights and analysis.

Once you complete your analysis, you'll be better prepared to make better data-driven models and algorithms.

KEY HIGHLIGHTS

- Live Project
- Designed With Analytics companies
- Work With An Industry Mentor
- Choose Domain Of Choice
- Inter-disciplinary
- Project Guidance
- Hand-holding
- Data Support
- Domain Expertise Support
- 2-month Duration

CAPSTONE
PROJECT
EXAMPLES

E-COMMERCE
Market Basket Analysis
What could be sold together to enhance Marketing impact and Sales

HEALTHCARE
Healthcare Analytics
Apply Data Science frameworks to predict disease outbreaks and run healthcare analytics

WEB AND SOCIAL MEDIA
Sentiment Analysis
Perform Text Mining and Sentiment Analysis to understand next steps in your digital strategy

CAPITAL MARKETS
Asset Price Prediction
Application of Predictive Modelling over asset price prediction

BANKING
Credit default Prediction
Machine Learning and Predictive Analytics to understand credit defaults

SUPPLY CHAIN
Demand Forecasting
Apply Data Science algorithms to predict future Demand and hence optimize Supply Chain
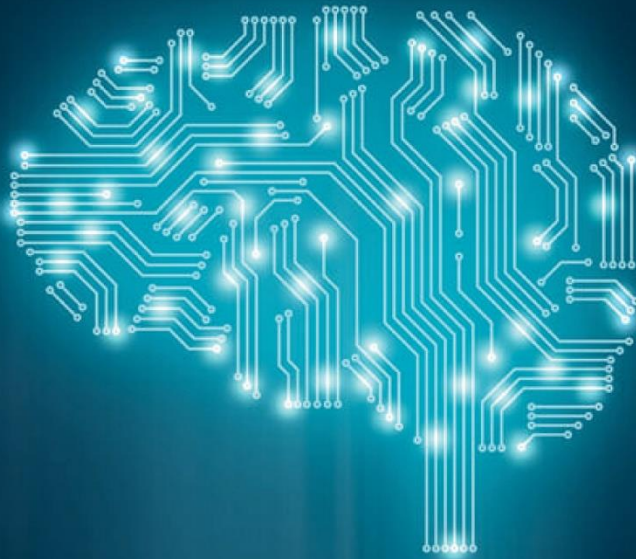
06

OTHER PROGRAMME DETAILS

ELIGIBILITY
CRITERIA

EDUCATION

For Individual Certification
10/+2 aspiring candidates of any educational background with an analytical frame of mindset are most suited one to pursue Data Science's various certifications.

For PG Diploma Certification
Any undergraduate degree holder like BCA, BBA, BTech, BEng., BCom. etc.

WORK EXPERIENCE

Work experience is not mandatory.

However, it is desired that you have internship or full-time experience so that you can move up the learning curve faster through prior industry domain knowledge.

PROGRAMMING EXPERTISE

It is not required to have a programming background, although desirable.

However, those without programming background will undergo pre-requisite training on programming to accelerate the learning when the programme begins.

SELECTION & ADMISSION PROCESS

Application Process

The Application process consists of a few simple steps as shown below. An offer of admission would be made to the selected candidates and accepted by the candidates by paying the admission fee.

```
                          Check Eligibility
                (https://christuniversity.in/applyonline)
                          
   ┌──────────────────────────┐        ┌──────────────────────────┐
   │   Online Application      │        │   Offline Application     │
   │ (https://christuniversity │        │   (buy in the premises)   │
   │    .in/apply-online)      │        │ (Refer the website for    │
   │                           │        │  the programmes having    │
   │                           │        │     offline modes)        │
   └──────────────────────────┘        └──────────────────────────┘

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │ First time users Register │        │ First time users Register │
   │          at               │        │          at               │
   │ (https://christuniversity │        │ https://appstat.          │
   │    .in/apply-online)      │        │  christuniversity.in      │
   └──────────────────────────┘        └──────────────────────────┘

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │   Login through the       │        │   Login through the       │
   │   Registered Email ID     │        │   Registered Email ID     │
   └──────────────────────────┘        └──────────────────────────┘

   CHRIST Programmes
   ANDROID APP
   Available on Google Play

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │ Choose Programme and click│        │ Select the programme for  │
   │     APPLY ONLINE          │        │ which the application was  │
   │                           │        │ bought and click          │
   │                           │        │     APPLY OFFLINE         │
   └──────────────────────────┘        └──────────────────────────┘

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │   Fill all the details    │        │ Enter the Application No & │
   │                           │        │   Payment receipt No      │
   └──────────────────────────┘        └──────────────────────────┘

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │ Select the Date and Venue │        │   Fill all the details    │
   │  for the Selection Process│        │                           │
   └──────────────────────────┘        └──────────────────────────┘

   ┌──────────────────────────┐        ┌──────────────────────────┐
   │    Make the payment       │        │ Select the Date and Venue │
   │                           │        │  for the Selection Process│
   └──────────────────────────┘        └──────────────────────────┘

                       Submit the Application

   ┌────────────────────────────────────────────────────┐
   │ Download the E-Admit Card from your login           │
   │ 3-5 daysprior to the Selection process Date         │
   └────────────────────────────────────────────────────┘

   ┌────────────────────────────────────────────────────┐
   │ Attend the Selection process As per the Date        │
   └────────────────────────────────────────────────────┘
```
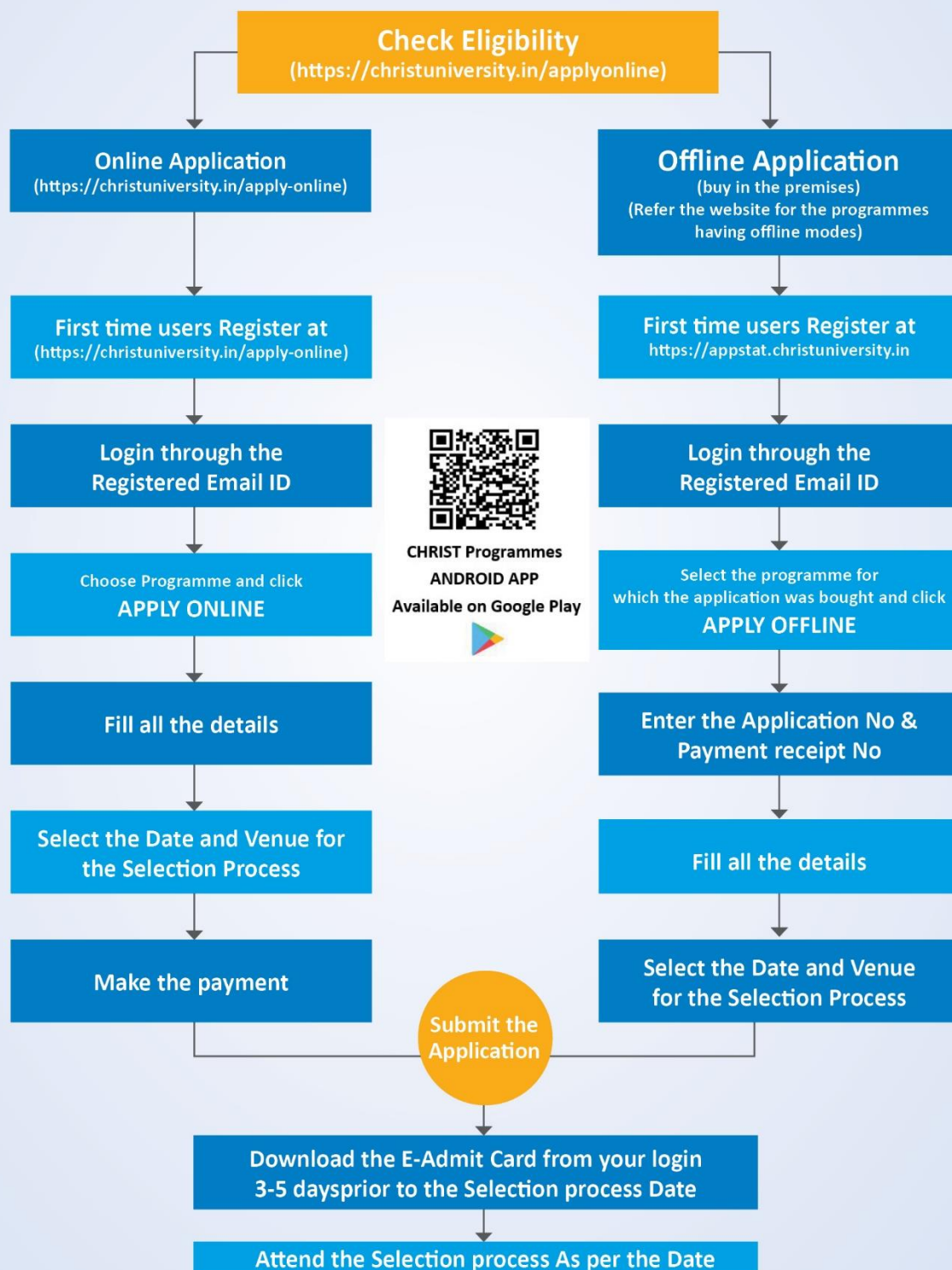
FULL PROGRAM
FEES

PROGRAM FEE
Application fee: INR 500
Indian participants: INR 275,000
International participants: USD 6500

FINANCING OPTIONS
0% Interest EMI option available with partner banks
Easy procedure with partner banks
EMI as low as INR 14,000 per month
Special rate for CHRIST students

SCHOLARSHIPS
Existing CHRIST students and Alumnus: Available
Other participants: Available on outstanding merit record

CORPORATE DISCOUNTS
Available on nominations of 2+ participants
Kindly contact us for further details

SINGLE CERTIFICATION
FEES

PYTHON ESSENTIALS & VISUALIZATION FOR DATA SCIENCE	APPLIED STATISTICS FOR DATA SCIENCE USING PYTHON	MACHINE LEARNING & PREDICTIVE MODELLING FOR DATA SCIENCE	APPLIED BUSINESS ANALYTICS + CAPSTONE PROJECT	APPLIED BIG DATA ANALYTICS
Duration: 40 hours Fees: INR 30,000 + GST	Duration: 50 hours Fees: INR 50,000 + GST	Duration: 60 hours Fees: INR 75,000 + GST	Duration: 90 hours Fees: INR 85,000 + GST	Duration: 60 hours Fees: INR 100,000 + GST

CHRIST
(DEEMED TO BE UNIVERSITY)

PUNE LAVASA CAMPUS
The Hub of Analytics

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CHRIST University Road
30 Valor Court
Pune 412112, Maharashtra.

Ph: 1800-123-2009 (Toll Free)
Web: lavasa.christuniversity.in

E-mail: mail.lavasa@christuniversity.in

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Bengaluru 560029
Karnataka

Ph.: +91 80 4012 9100/9600
Web: christuniversity.in

Email: mail@christuniversity.in

Delhi NCR Campus
Mariam Nagar, Meerut Road
Delhi NCR
Ghaziabad - 201003

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