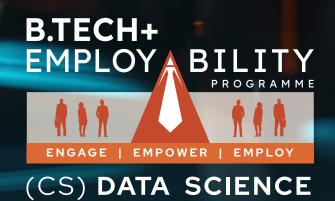**VISHVESHWARYA GROUP OF INSTITUTIONS**

Affiliated to AKTU, Lucknow (U.P) | CCS University, Meerut (U.P)
Technical Campus, Approved by AICTE / UGC / PCI / BTE / BCI
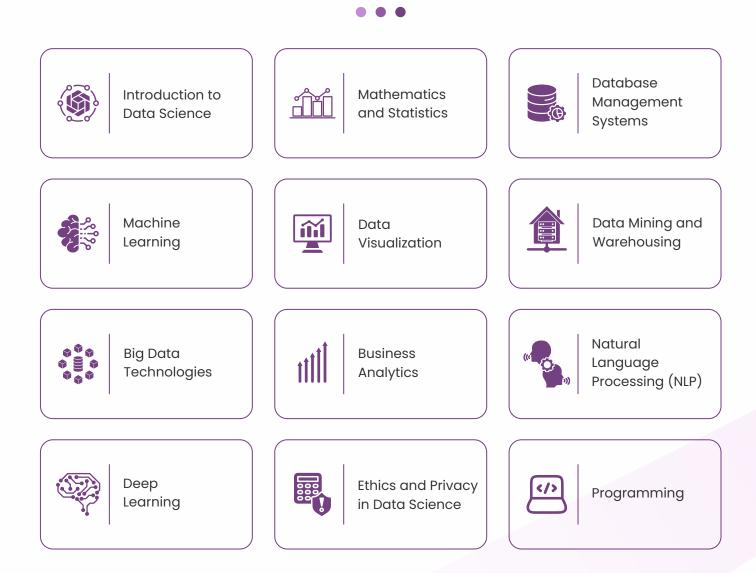Approved by Ministry of Education, Govt. of India

SINCE 2000

25 YEARS OF Academic Excellence

Microsoft EDUCATION CAMPUS

Data Science is the language of the **powerholders**

B.TECH+
EMPLOYABILITY
PROGRAMME

ENGAGE | EMPOWER | EMPLOY

(CS) DATA SCIENCE

Why Data Science

The Data Science Engineering program **B.Tech.** (CS) **Data Science** equips students with comprehensive skills in data analysis, machine learning, and statistical modeling. The curriculum blends computer science, mathematics, and domain-specific knowledge to address real-world problems. Graduates are prepared for high-demand roles in various industries, leveraging data-driven insights for strategic decision-making. This program fosters innovation, critical thinking, and practical expertise in emerging technologies.

In-grid Core Skills to be learned

Introduction to Data Science	Mathematics and Statistics	Database Management Systems
Machine Learning	Data Visualization	Data Mining and Warehousing
Big Data Technologies	Business Analytics	Natural Language Processing (NLP)
Deep Learning	Ethics and Privacy in Data Science	Programming

Off-Grid Skills to be Learned

12 Hands-on (Experiential and Project-based) industry-driven certification

Why
B.Tech. (CS) Data Science?

Global Scenario

High Demand for Data Scientists

The U.S. Bureau of Labor Statistics projects a 15% growth rate for data science roles from 2021 to 2031.

Interdisciplinary Skills

Data Science blends computer science, statistics, and domain expertise, enhancing versatility.

Diverse Career Opportunities

Roles include data analyst, machine learning engineer, and business intelligence analyst across industries

High Earning Potential

According to Glassdoor, the average salary for data scientists in the U.S. is over $113,000 annually.

Impactful Work

Data science drives innovations in healthcare, technology, and environmental science, solving complex problems.

Innovation and Research

Fields like AI and big data analytics rely heavily on data science, pushing technological boundaries

Global Opportunities

Data scientists are in demand worldwide, with opportunities in leading companies like Google, Amazon, and Microsoft

Flexibility and Versatility

Skills are transferable across industries, offering career flexibility.

Problem-Solving Skills

Curriculum emphasizes analytical and problem-solving abilities, crucial for strategic decision-making

Future-Proof Career

Data-driven decision-making ensures sustained demand for data science professionals.

Why
B.Tech. (CS) Data Science?

India Scenario

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High Demand for Data Scientists

NASSCOM reports that India will need over 800,000 data science professionals by 2025.

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Interdisciplinary Skills

Indian data science programs integrate computer science, statistics, and domain expertise, enhancing career versatility.

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Diverse Career Opportunities

In India, data scientists can work as data analysts, machine learning engineers, and business intelligence analysts in sectors like IT, finance, and e-commerce.

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High Earning Potential

According to Analytics India Magazine, the average salary for data scientists in India is around INR 10 lakh per annum

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Impactful Work

Data science in India is revolutionizing fields like healthcare, agriculture, and urban planning, solving critical issues.

Innovation and Research

Indian institutes like IITs & IISc are leading in AI and big data analytics research, driving technological advancement.

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Global Opportunities

Indian data scientists are in demand globally, with opportunities in multinational companies like TCS, Infosys, and Wipro

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Flexibility and Versatility

Data science skills are applicable across various Indian industries, offering career flexibility and growth.

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Problem-Solving Skills

Indian data science curricula emphasize analytical and problem-solving skills, essential for strategic decision-making.

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Future-Proof Career

With India's digital economy booming, the need for data-driven decision-making ensures sustained demand for data science professionals.

Areas where prospective **Data Scientists** can work

Healthcare
Analyzing patient data for predictive diagnostics, personalized medicine, and improving healthcare services.

Finance
Developing algorithms for fraud detection, risk management, credit scoring, and investment strategies.

Manufacturing
Improving production processes, predictive maintenance, and supply chain optimization through data-driven insights.

Tele-communications
Optimizing network performance, reducing churn, and improving customer service through data analysis.

Marketing and Advertising
Using data to target advertising, measure campaign effectiveness, and understand consumer behavior.

Retail and E-commerce
Enhancing customer experience through personalized recommendations, inventory management, and sales forecasting

Energy and Utilities

Enhancing energy management, grid optimization, and predictive maintenance of infrastructure

Education

Personalizing learning experiences, predicting student performance, and improving administrative operations through data analysis.

Robotics

Enhancing robot perception, motion planning, and interaction capabilities through data-driven approaches.

Transportation and Logistics

Optimizing routes, managing fleets, and improving delivery efficiency using data analytics.

Government and Public Policy

Analyzing data for policy making, public health management, urban planning, and improving public services.

Autonomous Vehicles

Creating and refining algorithms for self-driving cars, drones, and other autonomous systems.

Quantum Computing

Working on data analysis methods and algorithms that leverage quantum computing power.

Biotechnology and Genomics

Analyzing genetic data for personalized medicine, drug discovery, and understanding genetic diseases.

Sports Analytics

Utilizing data to enhance player performance, injury prevention, and strategic decision-making in sports.

Artificial Intelligence and Machine Learning

Developing advanced algorithms, neural networks, and AI models for various applications.

Climate Science and Environmental Monitoring

Enhancing robot perception, motion planning, and interaction capabilities through data-driven approaches.

Augmented Reality (AR) and Virtual Reality (VR)

Developing immersive experiences and optimizing performance through data analytics.

Smart Cities

Implementing data-driven solutions for urban planning, traffic management, and improving public services.

Cybersecurity

Using data science for threat detection, anomaly detection, and developing robust security protocols.

Projected job statistics for
Data Science Professionals in india by 2026

Including company-specific insights

Demand Surge

The number of open positions for data science and analytics roles in India is expected to exceed **200,000** by 2026, reflecting continued growth in demand.

Industry Distribution

Major sectors driving demand include IT services (**40%**), banking and financial services (**18%**), healthcare (**15%**), and e-commerce (**10%**).
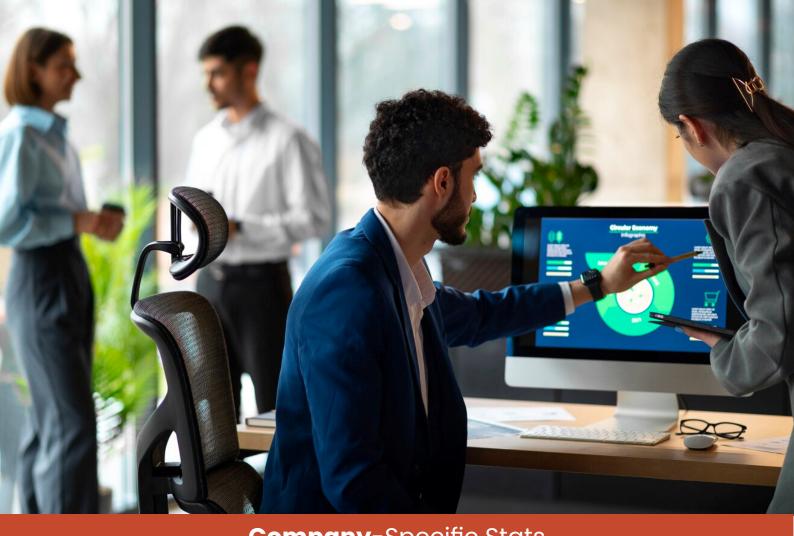
Salary Growth

The average salary for data scientists in India is expected to rise to INR **12-15 lakh** per annum, with experienced professionals potentially earning INR **25-35 lakh** annually.

Company-Specific Stats

TCS

TCS plans to hire over **40,000** data science professionals by 2026, focusing on AI and machine learning solutions.

Infosys

Infosys aims to recruit around **30,000** data scientists to support their growing data analytics and AI divisions.

Wipro

Wipro is expected to expand its data science workforce by **25,000**, emphasizing digital transformation projects.

Accenture

Accenture plans to onboard **35,000** data science experts to enhance their analytics and consulting services.

Cognizant

Cognizant targets hiring **20,000** data scientists, with a focus on healthcare, finance, and e-commerce analytics.

IBM India

IBM India aims to increase its data science talent pool by **15,000**, prioritizing advancements in cloud computing & AI.

Amazon India

Amazon India is set to hire over **10,000** data scientists to bolster their e-commerce, logistics, and AWS services.

Flipkart

Flipkart plans to recruit **8,000** data science professionals to enhance their retail analytics and customer experience.

Prospective career roles after completing a B.Tech (CS) Data Science

■ Career Role ■ Average Salary (INR)

■ **Data Scientist**
■ High (10-30 lakhs per annum)

■ **Machine Learning Engineer**
■ High (10-30 lakhs per annum)

■ **Quantitative Analyst** (Quant)
■ High (10-30 lakhs per annum)

■ **Business Intelligence Analyst**
■ Moderate (5-15 lakhs per annum)

■ **Research Scientist**
■ High (10-30 lakhs per annum)

■ **Data Analyst**
■ Moderate (5-15 lakhs per annum)

■ **AI Specialist**
■ High (10-30 lakhs per annum)

■ **Data Engineer**
■ High (10-30 lakhs per annum)

■ **Predictive Analytics Specialist**
■ Moderate (5-15 lakhs per annum)

■ **Big Data Engineer**
■ High (10-30 lakhs per annum)

■ **Consultant**
■ High (10-30 lakhs per annum)

■ **Data Architect**
■ High (10-30 lakhs per annum)

■ **Product Manager** (Data Products)
■ High (10-30 lakhs per annum)

■ **Data Science Manager/Team Lead**
■ High (10-30 lakhs per annum)