

Top 4 Hidden STEM Careers

Meet the science careers most students never hear about

For years, science students have mostly heard about two "safe" career options: engineering and medicine. But the STEM (Science, Technology, Engineering, and Mathematics) universe today stretches far beyond hospitals and coding offices.

Across the world, people are studying pollution through satellites, designing cities that can withstand floods, analysing criminal behaviour, and using computers to understand human genes. Some careers even blend science with psychology, geography, environmental studies, or technology in surprising ways.

Many of these jobs barely existed a generation ago.

As India rapidly advances in areas like artificial intelligence, biotechnology, climate research, green technology, and smart infrastructure, entirely new opportunities are opening up for curious young minds.

Let's explore four fascinating STEM careers that are quietly shaping the future around us.

Careers Hiding In Plain Sight

1. The Bioinformatics Analyst

This career combines biology with computer science.

Bioinformatics analysts study DNA, diseases, and medical data using software and algorithms.

During the COVID-19 pandemic, Indian scientists used bioinformatics tools to track virus mutations and create faster research systems.

One famous Indian scientist in this field is Dr GN Ramachandran, whose research on protein structures laid the foundation for modern biological data science and genetics.

What they do:

- ▶ Study genetic information
- ▶ Help develop medicines
- ▶ Analyse disease patterns
- ▶ Work with hospitals and research laboratories

Skills needed:

- ▶ Biology
- ▶ Basic coding
- ▶ Data analysis
- ▶ Curiosity and patience

Top Institutes in India:

- ▶ Indian Institute of Science
- ▶ Savitribai Phule Pune University
- ▶ University of Hyderabad

2. The Climate Data Scientist

Climate change is no longer studied only by environmental activists anymore. Climate data scientists use mathematics, satellites, AI, and weather systems to understand rising temperatures, floods, droughts, and pollution.

Indian climate scientist Roxy Mathew Koll became widely known for his research on changing monsoon patterns and warming oceans around India.

Climate scientists today work with:

- ▶ Governments
- ▶ Space agencies
- ▶ Weather companies
- ▶ Disaster management teams
- ▶ Some even help farmers predict rainfall patterns more accurately.

Top Institutes in India:

- ▶ Indian Institute of Tropical Meteorology
- ▶ TERI School of Advanced Studies
- ▶ Indian Institute of Technology Bombay

Cool fact:

India's weather department now uses supercomputers capable of performing quadrillions of calculations per second (petaflops) to improve forecasts.

3. The Urban Planner

Ever wondered why some cities flood after small rains while others handle traffic better?

Urban planners design cities so that people can live more safely and comfortably. They study roads, housing, drainage systems, parks, transport, pollution, and public spaces.

Indian urban expert Bimal Patel played a major role in projects like the Sabarmati Riverfront and various urban redevelopment plans.

Urban planning combines:

- ▶ Geography
- ▶ Architecture
- ▶ Environmental science
- ▶ Technology
- ▶ Social understanding

Urban planners help create:

- ▶ Safer roads
- ▶ Cleaner neighbourhoods
- ▶ Better transport systems
- ▶ Flood-resistant city layouts

With India's cities growing rapidly, this career is becoming more important every year.

Top Institutes in India:

- ▶ School of Planning and Architecture
- ▶ CEPT University
- ▶ Jamia Millia Islamia

4. The Forensic Psychologist