

'Innovation-driven course in Computing Research poised towards job creation'

Publication: Times of India (Bangalore)

Date: 11-07-2022 Page 02



Innovation-driven course in Computing Research poised towards job creation

Computing Research is finding applications in e-commerce, supply chain and finance

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As India is on its way to becoming a digital nation, the computing research segment across all sectors has grown in the past five years and is likely to create more career opportunities. Computing Research deals with research in Computer Science and Computer Engineering by using the basics of computing algorithms.

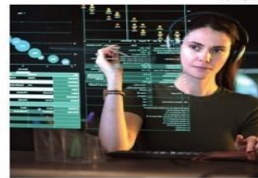
The subject also finds its applications in other domains including Life Science, Biology, and Materials Science. Computing Research is also applicable in industrial sectors like e-commerce, supply chain, finance, and many other fields. The stream will create employment in the future as computer-based innovation has penetrated every domain of life and forms the core of business solutions in health, transport, and education. Scholars with engineering backgrounds can find research work or jobs in academia, industry, government offices.

Exploring pre-doctoral assignments

"Scholars can pursue their careers in academia by taking up a Junior Research Fellow (JRF) role in government-funded projects running at research centres of several departments of government bodies or research institutions," says Shreekanth M Prabhhu, HoD-CSE at CMR Institute of Technology, Bengaluru.

To raise interest in Computing Research and hire the right talent, many research labs endorsed by IT giants such as TCS, Microsoft, Google, and IBM, run pre-doctoral programmes, in India. The students join the pre-doctoral profile that offers a decent stipend and are encouraged to explore the assigned research topics for two years. After successful completion of the programme, they might get into Stanford University where they pursue a full-time PhD or take up research assignments.

Gautam Shroff, SVP and Head, TCS Research says, "Students need to understand if research is their calling or not. For the same, they also get to spend two years working on a research project while earning. The



response for retaining the right fit in academia with gradual career progression has been satisfactory, so far."

Ranjita Bhagwan, senior principal researcher, Microsoft Research India says, "In the past few years, there has been an explosive growth in the use of technologies. But, this is leading to several new problems, which researchers are identifying and solving. Qualitative, as well as quantitative research work, is required. As a result, the academia space awaits recruitment for varied job roles." Stressing the need to architect opportunities for lateral movement for working professionals from academics and industry, Prabhhu mentions that Computing Research scholars are being hired by industries. "Critical thinking, observation and experimentation approach of such candidates can usher radical change and innovative products can be developed," says Prabhhu.

Pushpendra Singh, professor, Computer Science & Engineering (IIT-Delhi) says, "Scholars with deep knowledge of computer science and computing research are needed for troubleshooting and bringing efficiency in the system. For instance, computer engineers working in healthcare not only provide solutions to store health data but also use modern machine learning techniques to develop helpful analytics."

"Several eligible students are hired by Biotech firms to work in quantum computing's area of quantitative hedge funds," says Dipyaman Sanyal, head of Academics and Learning, Hero Vired. Talking about the career trajectory of computing scholars, Prabhhu informs, "Students can also foray into data analytics jobs in the oil, automotive and energy sectors. Three other popular domains for jobs opportunities are Robotics, Artificial Intelligence, and ML."