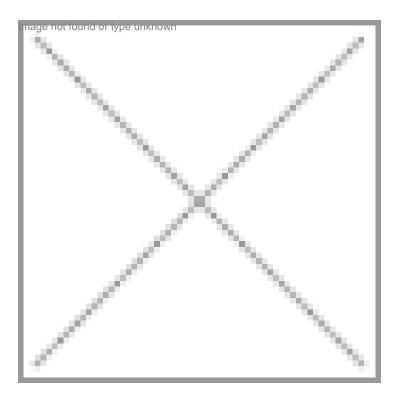


BioInformatics elicits IT savviness

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Many bioinformatics companies are coming up to cater to these needs of pharma and biotech industry, which provides growth opportunities in terms of knowledge base and career advancement. "There is a lot of data to be managed and mined. However, biotech companies over the last two years have been busy surviving and had not looked at solution providers for informatics solutions in a big way. Pharma companies, on the other hand, look for ready products to be bought and are generally averse to outsource custom projects. Availability of free software or software bundled with analytical equipment is another challenge facing the pure play bioinformatics companies," pointed Ajay Simha, director, SysArris Software Pvt Ltd, a company offering IT software solutions and services to the pharma and biotech segment since the past eight years.

Employer Expectations

Ideally a student should have: Vibhav Garg, functional consultant, Mascon Life Sciences, a company that develops bioinformatics software for pharma
act sound knowledge of the equar bold of current buzz about bioinformatics is partially justified. "There is an urgent need to understand the available data. But the hype created by unauthorized so-called training centers is absolutely unwarranted and
r• Knowledgele€ UNIX/≌inux the≎perating system used fo⊜arg informed. many computational biology programs
many computational biology programs Bioinformatics companies generally have well-defined teams with a clear business focus. For example, in Mascon, there are a€¢ A good grasp of the concept of reliational databases, force, consists of domain experts. The development team is the
subject are the heart of biginformatics of tware professionals. Then there is a business development team. Likewise, SysArris has domain experts who are thorough in genomics, cheminformatics and other areas. These experts understand the
êçt Brogramming languages such as Parkos Rythen, which utton. The software team then converts the requirements to a are popular in the field of Bioinformatics. In the future,
knowledge of object-oriented databases may be increasingly Timpertavear, bioinformatics accounted for about 4 percent of the total size of the biotech industry, but it is expected to catch
up fast. The total sales revenue (2002-03) generated by this segment was about Rs 75 crore and a major chunk of it (64 act Expect knowledge of secuence analysis programs likeday most of the companies in this segment are small to mid size,
BLASTpis pritical anging from 25 to 200 plus and the average man to women ratio is 2:1.
ꀢ Web skills of course are necessary including the ability it es of the person and performers are recognized and well to write Hypertext Markup Language (HTML) be anywhere from Rs 10,000 to Rs 20,000 per month depending on the
experience of the candidate, it can go up very high as there is a review every six months," said Anuradha Acharya, CEO,
Ocimum Biosolutions. Others too feel the same. The salaries offered can start from Rs 1.8-2 lakh per annum and can reach as high as Rs 12-15 lakh per annum based on the experience and type of skills.

This nascent field provides immense growth opportunities in terms of knowledge base, market exposure and career advancement. "We have identified several growth tracks for our employees. These could be either in pure software development, bioinformatics, management or sales and marketing. A person could start as a trainee, bioinformatician or software developer and could end up becoming part of the top management," added Anuradha.

Selection process

For entry and junior level candidates, companies conduct written tests and interviews, whereas at senior levels intake is generally through referrals and a round of discussions. "We generally look for people with at least one year relevant experience; if no suitable candidates are found, we take the most suitable candidate and train on-the-job," said Ajay Simha. Some of the companies do campus recruitments. Often, companies prefer to go to the IITs and RECs.

Besides the basic qualification (a masters or higher degree in a branch of life science or computer science), prior experience or training in the industry or research organization is an added advantage concur most company heads. But the experience required would depend on the openings from time to time. As such, bioinformatics being a new field, it is very difficult to get people who have cross-functional expertise. Hence, the companies generally provide training before putting the candidate to work. Most of them have arrangements for short-duration high-end specialized training for their employees.



According to YK Maheshwari, Sr VP, health care and life sciences, Kshema Technologies "hands-on training or experience is not a necessary prerequisite, but those with such experience are obviously professionals, who have developed software, who understand the development get (for bill of bill

In the next 10 years most new drug designs

A prior working knowledge of various analytical instruments like the HPLC, MS, Winke Mcroaniays, etc. help in understanding not only the functionality of the systems but also the complex data output for further analysis to be carried out and experience of using software applications like LIMS, drug discovery tools, etc. help in tools fail to achieve a scientist's need.

So is there a future? Maheshwari summed up: "There are multiple opportunities on what goestunder the wide banner of bioinformatics. Technical developments such as molecular genetics, proteomics on developments in the advances in life sciences, but there is a demand for novel automated tools in reduce the time involved in the discovery life cycle. There is a shortage of individuals, though critical for the buyer with the necessary multidisciplinary expertise for the development of genomic/analytics applications that demands a high level of knowledge/interpretation skill beyond that previously employed in the information technology sector." But at the same time the buzz about bioinformatics is not entirely justified since it undermines the requirement of core strengths such as fundamental biology, genetics, molecular biology, statistics, computer science and mathematics and places emphasis instead on a loose mix of all these fields.

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