
Computer Science and Management: A General Outlook

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Abstract:

Nothing in this world is completely detached from computers. Each one of us employs it our different ways, personally as well as professionally. Informatics is a field not only employed for effective management but also a field that requires a specialised management for itself. A usual pattern of managers in this field are without any formal training to manage an Informatics system. Considering these two points, I shall in the most basic manner frame my article to widen its approach and maximise its degree of comprehension.

A core part of my paper is its reliance on first-hand accounts given by my son as his experiences as an Engineering student in his college and later as a professional and hence not many references to articles and books shall be found.

The Science of computers is virtually everywhere; there's no denying that. Informatics pervades the air at the moment. Be it travel, banking, films, anything. No field in this world can deny its connection to this field. So, in the light of this major revolution that many tech-pundits dub as the second industrial revolution, a new undertaking is to give this field its own specialised managerial thinking.

My focus throughout the paper shall emphasise the importance of information systems as far as managing corporations is concerned and further it shall emphasise on the dearth of skilled technology management within the field itself.

Management, which up to had been a word associated with finance, marketing and human resources is lately being recognised as something engineers need to study.

Of late the world realises the dearth of skilled manpower we face when it comes to managing technology.

With the eyes of an economist, I shall look upon the broader perspective and see that no formal training has ever been given to people working in the applied field of informatics. To exacerbate the situation, there's no college that provides a degree that can develop Informatics' Manager.

In the age of economic boom, management the most used technology is a challenge and with the continuing trends of neglect this challenge seems to forecast no signs of mitigation.

Management

A basic management function involving formulation of one or more detailed plans to achieve optimum balance of needs or demands with the available resources.

According to the management guru Peter Drucker (1909-2005), the basic task of management includes both marketing and innovation. (1)

Management Information System

A **management information system (MIS)** provides information that organizations require to manage themselves efficiently and effectively. (2) Management information systems are typically computer systems used for managing. The five primary components: 1.) *Hardware*, 2.) *Software*, 3.) *Data (information for decision making)*, 4.) *Procedures (design, development and documentation)*, and 5.) *People (individuals, groups, or organizations)*. Management information systems are distinct from other information systems because they are used to analyze and facilitate strategic and operational activities. (3)

With the advent of Artificial Intelligence, this system has taken a giant leap.

More recently, a study was conducted where artificial Intelligence was employed to predict the dependence of effluent water quality in a Waste Water Treatment Plant from the data available for various parameters for inlet and discharge water and hence analyse the dependence of the treatment on the considered parameters.

In every company, MIS is employed which tracks down almost every single piece of work, consumption or achievement in the form of numeric data just to analyse what are the factors that actually have an impact on company's performance.

In many companies like Vedanat, Jharsuguda, it was found that things which through common sense might seem influential were shown to have little importance when analysed in a quantitative manner through MIS.

Data Analytics:

A buzzword in the field of business these days is Data-Analytics. Smartcube, Mu Sigma are the companies that specialise in this sector. According to a Mu Sigma professional introducing his company to NIT Jalandhar students during 2013 placement sessions, said that

the company relies at data provided by the client and helps them optimise their performance by drawing various inferences from the data pattern.

In this increasingly competitive world, Data Analytics, especially for banks, food joint companies, retail chains has become an exceptionally useful tool to draw consumption patterns and the parameters they depend upon.

Technology Management

The *Association of Technology, Management, and Applied Engineering* defines technology management as the field concerned with the supervision of personnel across the technical spectrum and a wide variety of complex technological systems. Technology management programs typically include instruction in production and operations management, project management, computer applications, quality control, safety and health issues, statistics, and general management principles. (2)

The definition encompasses not only the field of computers and informatics but technology in all, e.g., power plants, aviation, etc. which again don't really work without informatics.

In the era of outsourcing, where specialisation is given the highest priority, it seems paradoxical that the field of Informatics, which companies like Vedanta and Jindal outsource, are being outsourced in fact, to individuals who manage technology without actually having undergone a training to do so.

Conclusion

The two choices I put forward are truly eccentric, especially the second one. However, the prime aim here is to put forward “what can be” and not what we already have. The information I share are facts and enlightening as far as the first part is concerned, however, my second point is an amalgamation of crisis in the job-market as well as my own personal views.

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