

Introducing HPC and Related Technologies Education in a Higher Education Institute in India.

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- **Abstract:** One of the modern criteria of a world superpower is its High-Performance Computing (HPC) capability in terms of aggregate TeraFLOPS. Even though India emerges as a world economic and financial superpower, the country lags behind in HPC capabilities compared to its competitor nations. So, there is a need to increase HPC capabilities and to train enough HPC professionals within the country. Government initiatives like National Super-computing Mission are addressing the first issue, but the later one has to be taken up by the higher education institutes in the country, with or without the government aid. This paper depicts the experience and strategies of such an experiment undertaken by a private engineering college in the country without much government support and thus not only transforming teaching and learning experience within the college, but also empowering its staff and students to embrace world class research in interdisciplinary areas. In doing so the college has built a mini-supercomputing facility and developed a unique stream of HPC, Cloud and Data Science curriculum in the post-graduate program in Computer Science. These efforts also resulted in initiating a series of non-formal HPC education initiatives such as workshops, faculty development programs and short-term certificate programs. Creating public and internal awareness was the key to the success of these initiatives and it bore fruits in terms of forming a supercomputing team at the affiliating university and procuring an HPC box at the same university for the use of all its affiliated colleges.
- **Keywords:** HPC education, HPC curriculum, Cloud computing curriculum, HPC system design, sNow! HPC software suite, Bright computing HPC software suite.