

Panel Discussion

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1 Panel: Time to Rethink Database Teaching in India?

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In the last decade or so, the scope of database research has witnessed an explosive expansion. When one looks at the research publications in top DB conferences, it is not surprising to see papers on topics ranging from machine learning to distributed systems, multi-modal datasets to petabytes of scientific data, solutions customized for modern hardware to visualization-driven analytics, and so on. In fact, these papers dominate the proceedings compared to papers on "traditional" DB topics.

Given this, an important question that the database research community faces is: are we teaching the right things in our database courses? There have been many panels to discuss these issues (including a recent panel in SIGMOD). The typical conclusion has been: *the fundamentals of database systems are important, and they have to be taught*. Unfortunately, this means very little time can be devoted to teaching the "hot" topics to undergrads and graduate students, resulting in little or no preparation for *state of the art* database methods and building of data-centric applications.

But now, there is new twist which could disrupt this traditional thinking: **the easy availability of online courses**. Technology and the popularity of online classes are radically transforming the educational process on both national and international scales. Nothing exemplifies this better than the great amount of excitement that the online versions of AI and ML courses of Stanford University have generated. With this new wave of teaching technology and methodology on our hands, we are forced to revisit our presumptions about pedagogy – particularly in the fast broadening field like databases, and in a region like India, where access to network is easier than good teachers!

The questions we explore in this panel include: *whether students be expected to learn the fundamental courses only through online courses, while lecture-hall courses be limited to more advanced topics? Or the model should be inverted? How can Industry actively participate in such teaching method so that they can get the best trained data-centric graduates?*