Insights: An Open Framework for Educational Data Research

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Abstract. Educational data mining and learning analytics span a range of domains -- off-line analysis of historical data, periodic batched processing, as well as real-time analysis. To fully utilize the power of data in education also requires closing the loop -- either an educator must be presented with information, or a computer has to be able to automatically act on it and adapt. We propose Insights -- an API which allows one to develop off-line analysis, and bring them all the way to production in systems which can respond and adapt to live data. This API was prototyped for the edX learning management system, but is designed to allow interchangeable analytics modules which can be shared among educational platforms.