

Machine Learning from Big Data: An Industry Perspective

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Everybody is talking about Big Data - hype or reality? Fact is: some of the most successful companies of all times have built their core business on Big Data. Nowadays, enterprises across industries are looking for ways to become more data-driven or data-centric in their products & services, internal processes, and decision making. It is sometimes not stressed enough though that Big Data benefits cannot be expected to materialize automatically, simply by being able to collect, store, and manage large volumes of unstructured and raw data. Rather one needs to model, possibly enrich or inter-link these data, and identify suitable prediction or forecasting problems with business impact.

I will present blueprints of examples where machine learning plays a critical role in the new economy and the enterprise of the future. Specifically, this will include online advertising and e-commerce, intelligent human-computer interfaces, as well as enterprise-level information governance. The emphasis will be on (i) a system-level understanding of how machine learning connects to (lower) data management layers and (higher) application layers, (ii) the deployment challenges of making machine learning scalable and work in practice, and (iii) the interplay between advances in research and engineering. Finally, I will present some thoughts about the societal (i.e. non-technical) challenges that come with the technological transformations of the type we are witnessing around Big Data.