

STeAMINg: Semantic Time Evolving Models for Industry 4.0

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Industry 4.0 is an initiative combining a set of technologies that helps to achieve more efficient manufacturing processes. An important characteristic for industrial production in Industry 4.0 is that physical items such as sensors, devices and enterprise assets are connected to each other and to the Internet; generating big amount of data, with different formats, various data sources, different underlying meanings, different temporal resolutions. Furthermore, these items perform tasks or processes that are executed over time so the values they generate and their context can change during the execution. In this work, we propose to use semantic technologies to (1) build a knowledge model that represents the resources and processes, and especially context modeling, and (2) deal with knowledge model evolution.