

The Power of Machine Learning in Simulation Data Management (SDM) to Boost Data Analysis

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Employing a simulation data management (SDM) system ensures a comprehensive archive of all conducted simulations within a specified timeframe. This encompasses crucial simulation metadata such as load cases, solver versions, and components, along with the simulation output comprising raw data and derived key-results. Centralizing and organizing this data in a uniform structure facilitates seamless data analysis and knowledge extraction across numerous simulations.

The utilization of open machine learning libraries and third-party solutions enhances the extraction of insights from the stored data, enabling the identification of patterns and trends essential for making data-driven decisions.

This presentation will illustrate the workflow for setting up simulation data and conducting simulations to generate key results necessary for data analysis. Additionally, it will showcase the integration of third-party solutions, such as FEMALYST from SIDACT or our proprietary Data Analysis add-on, through the scalable Add-on concept of SCALE.sdm | Result.

By adopting this add-on approach, SIDACT and other entities can seamlessly integrate their technology as third-party tools into existing simulation data management systems, leveraging proprietary front and back-end components while gaining access to simulation data.