Towards a predictive analysis, diagnose and maintenance of batteries: data set optimisation, an industrial perspective

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Flash Battery has been one of the first LFP battery assemblers to invest in remote control for warranty and maintenance management. The creation of the dataset started back in 2013, with the original purpose of improving the effectiveness of the service activities and checking the proper operation of each battery. A few years later, Flash Battery can count on a large, real-word operational "Battery Usage" database that can be used for multiple purposes: energy usage reports, fleet statistics, SOH models optimization and predictive lifecycle estimations. The application of Machine Learning techniques can further improve an early detection of anomalies and the battery lifecycle management. Moreover, within the new-generation Battery Management Systems, with their increased sensing capabilities and the ability to process and transmit larger quantities of data, Artificial Intelligence will be a primary instrument to deeply increase our knowledge, and to master a whole new generation of batteries and chemistries.