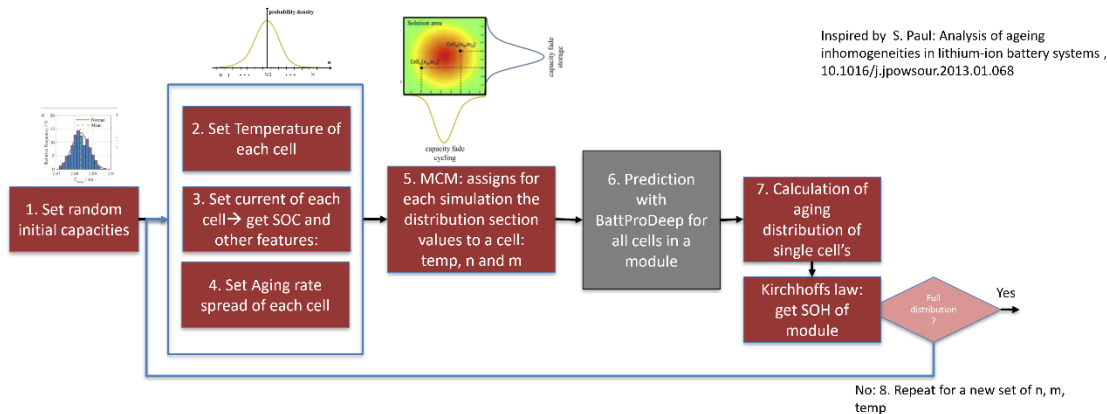




The Smart Energy Systems group is currently seeking candidates for final theses (or any other students who want to get involved):

Aging Prediction of Lithium-Ion Batterysystems using statistical methods and Machine Learning



Goal:

Integration of an Equivalent-Circuit-Model model into an ML-aging predictor framework for full statistical representation of cell-individual degradation behaviour in a big storage system

Tasks:

- Which parameters define cell-to-cell variability in storage systems?
 - How big is their spread (manufacturing tolerances, spread in current split etc)?
 - How can a full statistical experiment of degradation variability between single cells in a big system look like?
 - Can we find a representative system level SOH mean in the distribution of single cell SOH values?
- ➔ Inflate the existing ML model framework to a full statistical experiment where cell-to-cell variability is reflected.
- ➔ Couple the framework with an ECM and feed varying parameters.
- ➔ Do the experiment for a short usage profile.

Interested? Just reach out, English or German speaking applicants welcome 😊

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