Summary of this week

- This week, you learned that total-capacity relationship has a linear form with respect to a change in SOC x_i between two operating points and net ampere hours passed through cell over that interval, y_i
- However, since both x_i and y_i have uncertainty, standard least-squares linear regression tools are not correct to apply to problem
- Derived LS and WLS solutions as baseline to demonstrate the problems
- Also derived WTLS, which will give better solutions
- And, showed how to compute error bounds using Hessian of cost function

Where from here?

- While WLS allows closed-form, recursive, and fading-memory solutions, WTLS does not
- Since WTLS cannot be computed efficiently in general case, we seek specific scenarios where it can
- Then, we approximate those specific scenarios to give a near-optimal WTLS approximate method for estimating total capacity

Credits

Credits for photos in this lesson

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