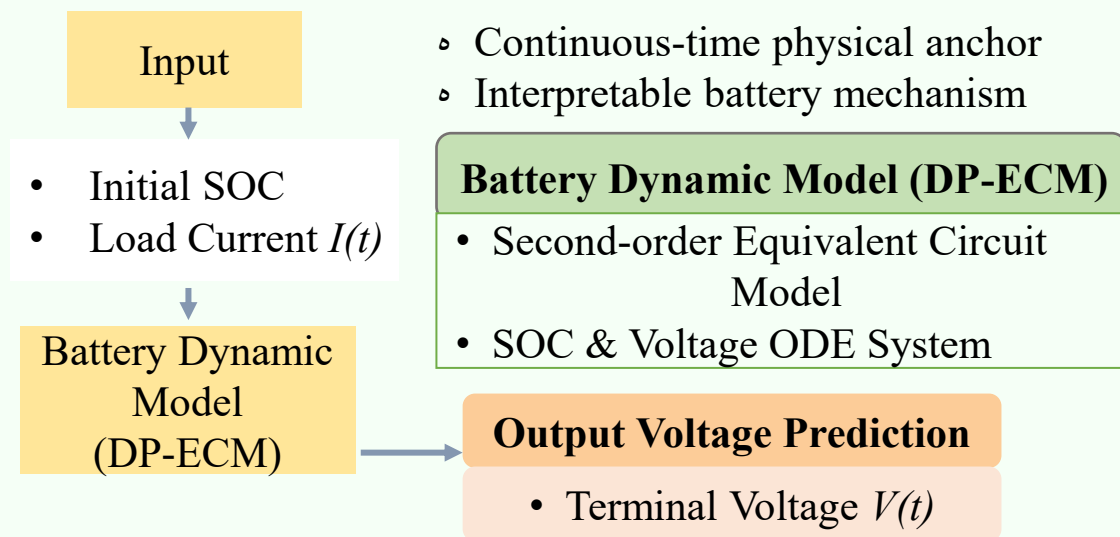
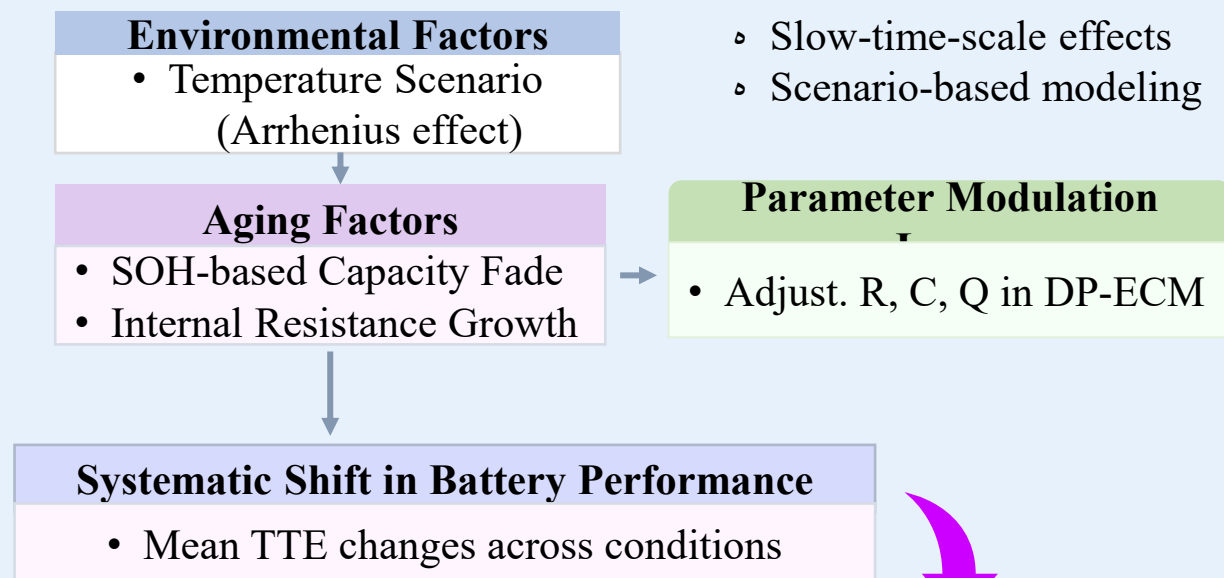


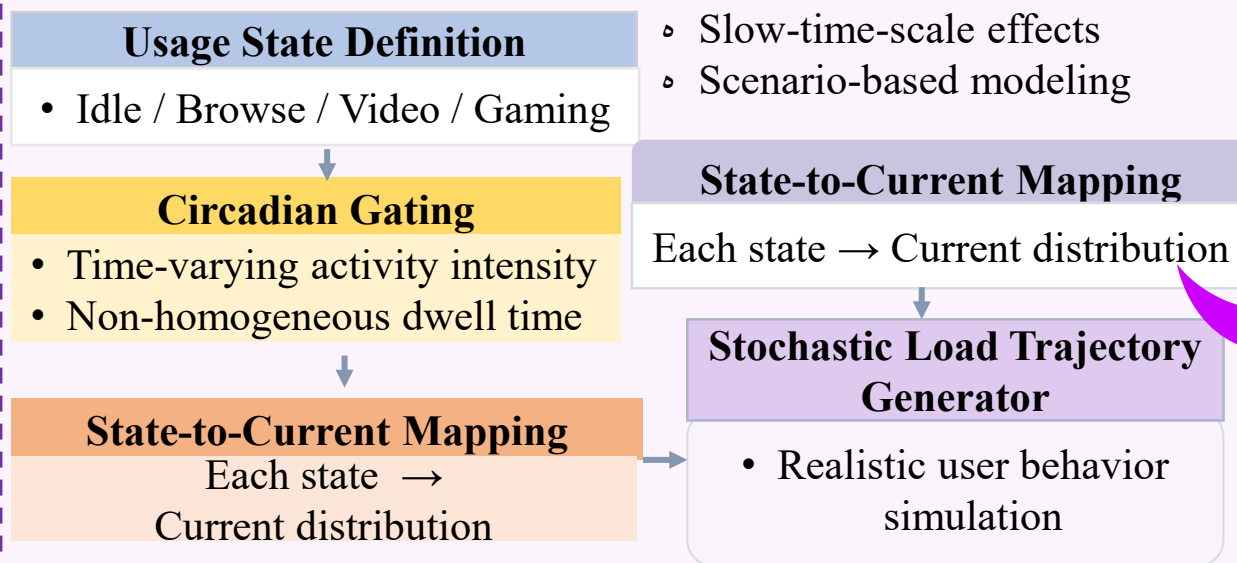
### Model 1: Physics-Based Battery Dynamics (DP-ECM)



### Model 2: Environmental & Aging Modulation Layer



### Model 3: Stochastic Usage Load Model (CTMC-CGSL)



### Model 4: Monte Carlo Prediction & Sensitivity Analysis

