



Development of AI-based surrogates from Quantitative Systems Pharmacology models

Presented by Mathworks

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The analysis of Quantitative Systems Pharmacology models typically requires a great number of simulations after sampling parameter values and/or evaluating different dosing schedules. To speed up the evaluation of numerous scenarios, AI-based surrogate models can be trained on existing simulation or clinical data to predict quantities of interest. In this half-day workshop, we will use SimBiology and MATLAB to: - Generate simulation data to train AI models - Explore Global Sensitivity Analysis and Feature Ranking techniques to reduce the number of parameters to consider - Train a regression model to predict simulation endpoints - Train a classifier to predict on/off outcomes (e.g., responder/non-responder) - Train Deep Learning networks such as Recurrent Neural Networks, and Physics-Informed Neural Networks or Neural ODEs to predict time courses.

Registration is complimentary; Limited to 25 attendees in order of request to attend.