

Bayesian  
optimization

+

*Model-level  
diversification*

+

*Safe early-  
termination*

+

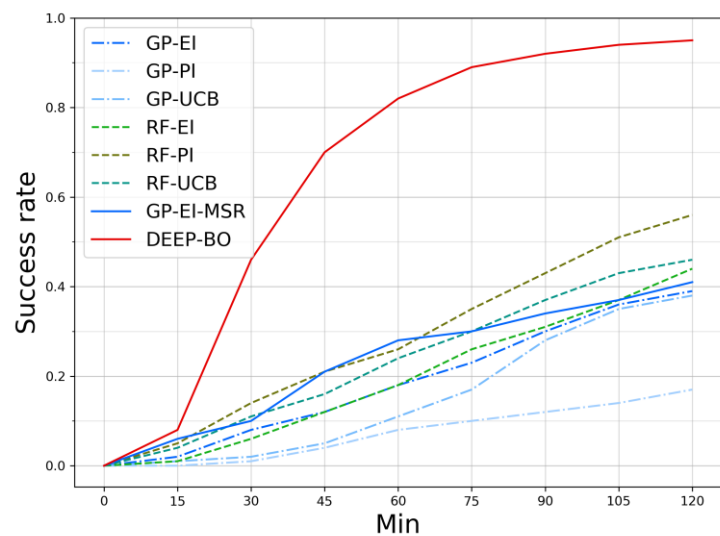
*In-progress  
parallelization*

+

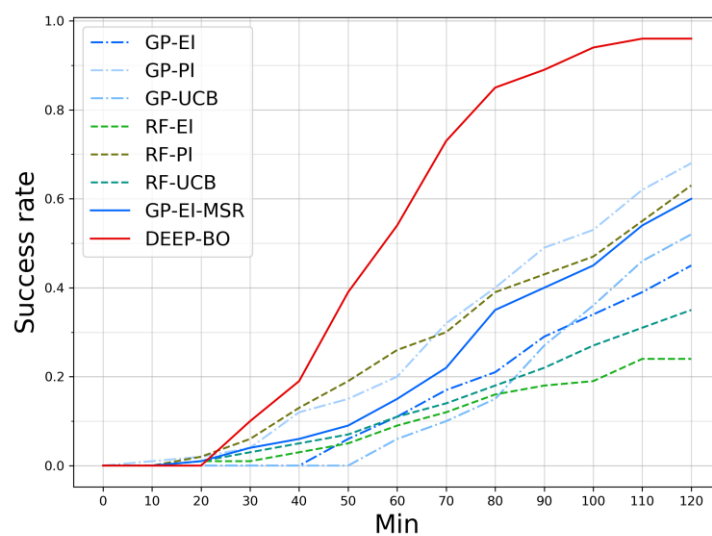
*Hybrid cost  
transformation*

||

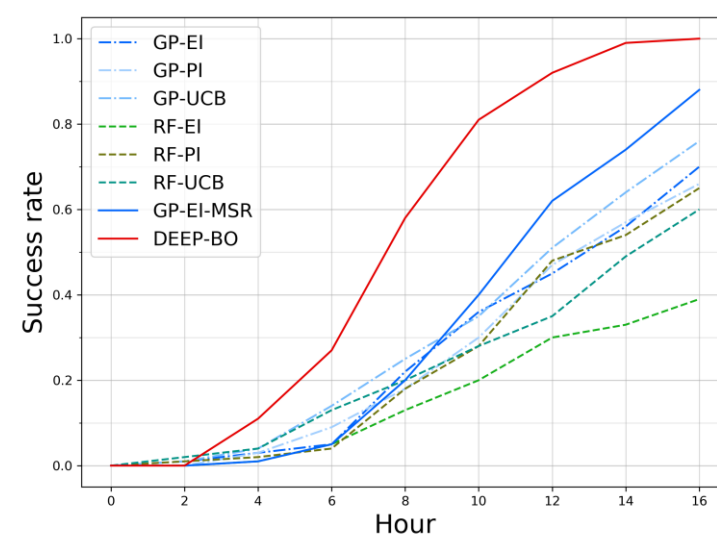
**DEEP-BO**



(a) Handwritten digit classifier tuning



(b) Language model tuning



(c) Image classifier tuning