MODEL TRANSFER BENCHMARK

Reference No / Version	B3-v1.0
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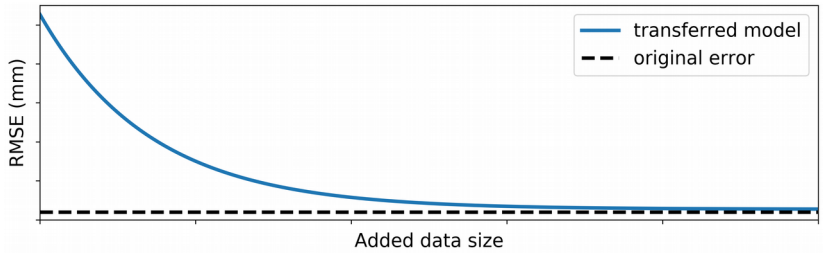
Adopted Protocol	Underactuated hand modeling protocol (P1-v1.0)
Scoring	Scoring should output the below figure for all test objects with the following steps: 1. Transfer prior model with *n* additional data points. 2. Sample a state *s* from the 10 recorded test paths. 3. Predict, using the model, horizon of 10 steps from *s*. 4. Compute RMSE between predicted path to the ground truth, and store. 5. Repeat 2-4 for 100 times and average the error. 6. Repeat 1-5 while increasing *n* from 1,000 to the maximum available points with increments of 2,000 points. 7. Plot figure RMSE vs. additional data points required. 8. Add original RMSE (before modifying the system) for 10 steps prediction as an horizontal line (constant value) in the plot. 
Details of Setup	Given prior model of a system, record new training data on the modified system (e.g., new hand, new object, task with external forces, new part in hand): If performed on simulation or on a new system: Record test paths, for each object, given 10 sequences of actions (given in the website): 1. Position an object in the grasp region. 2. Close fingers until they reach load of 100 (in Dynamixel units). 3. Stream sequence of actions in 10Hz to the actuators. 4. Record state of system in 10Hz. 5. Repeat 1-4 for all action sequences. If used on the provided (RUM) dataset, use prerecorded test paths. Transfer, using the evaluated algorithm, the prior model to the new system. Evaluate on test paths.
Results to Submit	Plot as described above.