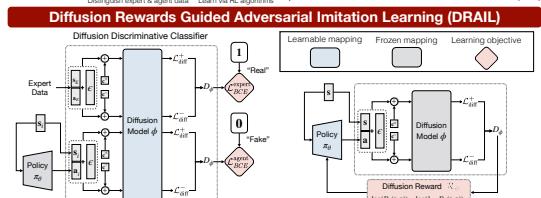
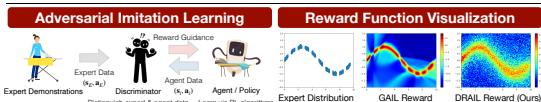
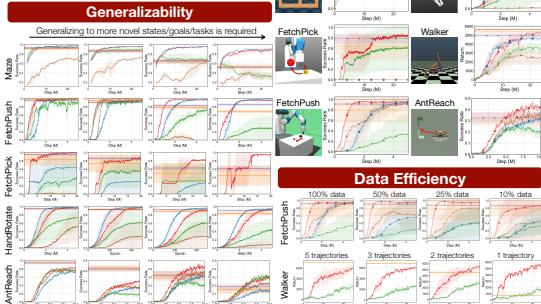


ACADEMIC & PROFESSIONAL HIGHLIGHTS



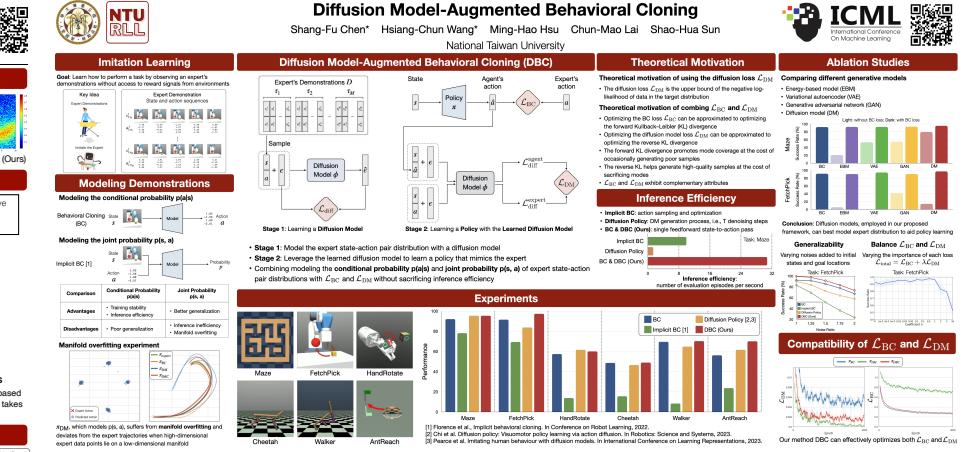
(a) **Learning Diffusion Discriminative Classifier**
 Diffusion discriminative classifier learns to distinguish expert data (s_t, a_t) from agent data (s_t, a_t) using a diffusion model ϕ by denoising expert and agent state-action pairs concatenated with a real/expert label c^* using a diffusion model ϕ by denoising expert and agent state-action pairs concatenated with a real/expert label c^* .
 • Diffusion Loss $L_{\text{diff}}(s, a, c) = \mathbb{E}_{t \sim T} [\| \hat{s}_t(s, a, c, t/c) - s_t \|^2]$
 • "Realness" of (s, a) : $D_{\text{diff}}(s, a) = e^{-L_{\text{diff}}(s, a, c^*)}$
 • Diffusion Reward $R_{\text{diff}}(s, a) = \log(D_{\text{diff}}(s, a)) - \log(1 - D_{\text{diff}}(s, a))$



NeurIPS 2024 — Poster Presentation



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Common IPC methods

- File
- FIFO (Named Pipe)
- Signal
- Semaphore
- Pipe
- Message Queue
- Shared Memory
- Socket

IPC

4 Common Multi-threading Pitfalls

- Thread Safety Problem
→ Data races and synchronization issues
- Double Free Problem
→ Freeing memory more than once
- Busy Wait with Global Flag
→ Stale flag caused by compiler optimization
- Cache Line Problem
→ False sharing slows down performance

Multi Thread



Best Master's Thesis Award, GICE, NTU



2nd Place, National Robotics Competition