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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PHD STUDENT SEMINAR

Feedback-Driven Prompt Refinement for Image Editing via Self-Distillation

By

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Abstract

Text-guided image editing enables intuitive control through natural language. However, editing quality remains highly sensitive to how user intent is translated into executable prompts for a given editor. Existing prompt-refinement approaches often rely on hand-crafted chain-of-thought reasoning or expert demonstrations, which tightly couple error diagnosis with prompt generation and limit scalability. Our key insight is that editing feedback can be leveraged as privileged information during training: it guides prompt refinement without requiring the model to explicitly generate diagnostic reasoning. Based on this insight, we propose FeedEdit, a feedback-driven prompt-refinement framework that formulates image editing as black-box optimization over natural-language prompts while decoupling evaluation from generation. FeedEdit uses causal feedback to construct supervised initialization and refinement targets, and uses hindsight feedback for online Self-Distillation Policy Optimization with a two-phase rollout. By using Qwen3-VL-8B as both the student model and a feedback-conditioned self-teacher, FeedEdit learns a feedback-free refinement policy for inference.

Date : 12 May 2026 (Tuesday)

Time : 3:00pm

Venue : Room 5508 (near Lifts 25/26)

All are Welcome!