

Introduction

Distractor Selection for Photo Cleaning

Image + User click

Dense Segmentation

Mask2Former [1]

EntitySeg [2]

✗ Cannot select out-of-domain objects (class-specific segmentation)

✗ Requires click for each instance (class-agnostic segmentation)

Interactive Segmentation

FocalClick [3]

RiTM [4]

✗ Requires multiple clicks for each object

✗ Requires at least one click for each instance

SimpSON

1C-DSN

IDS+PVM

SimpSON: Select object with single-click and find similar objects automatically

SimpSON

SimpSON includes three stages with three modules:

1C-DSN

CPN

PVM

Dataset synthesizing pipeline

Our real Distractor20K dataset

Experiments

1C-DSN module outperforms EntitySeg

Similarity map from one click

1C-DSN outperforms Interactive Segmentation

API/AR of IDS + PVM in finding similar distractors

Results of SimpSON in selecting distractors

Iteratively select distractors

1. Bowen Cheng et al., *Masked-attention mask transformer for universal image segmentation*, CVPR 2022
2. Lu Qi et al., *Open-world entity segmentation*, TPAMI 2022
3. Xi Chen et al., *Towards practical interactive image segmentation*, CVPR 2022

4. Konstantin Sofiiuk et al., *Reviving iterative training with mask guidance for interactive segmentation*, ICIP 2022
5. D Goldman et al., *Content Aware Fill*, Photoshop feature 2010