

Open-World Amodal Appearance Completion

Presentation by Jiayang Ao

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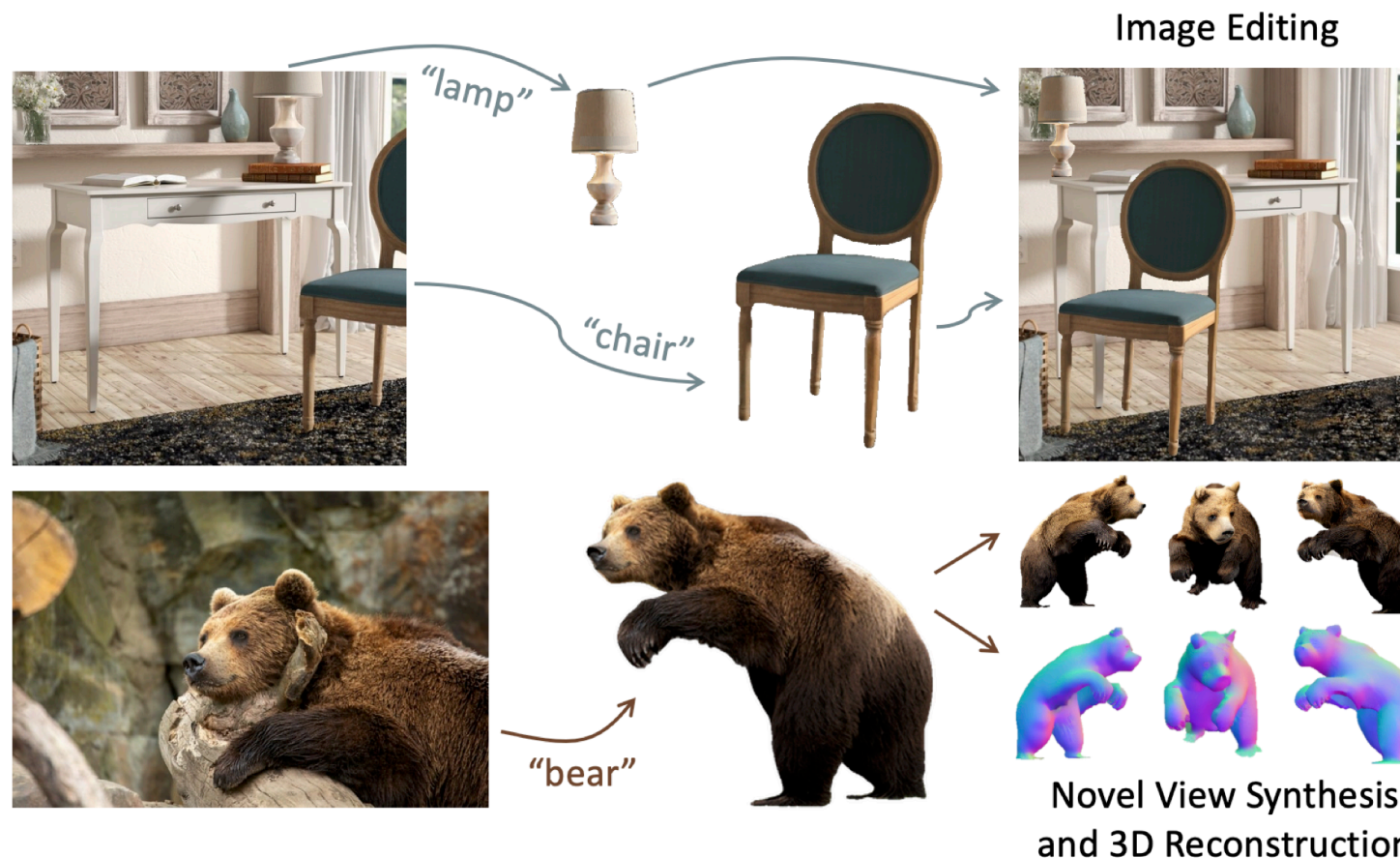
Code & Paper

Introduction

Reconstruct the hidden parts of any occluded objects



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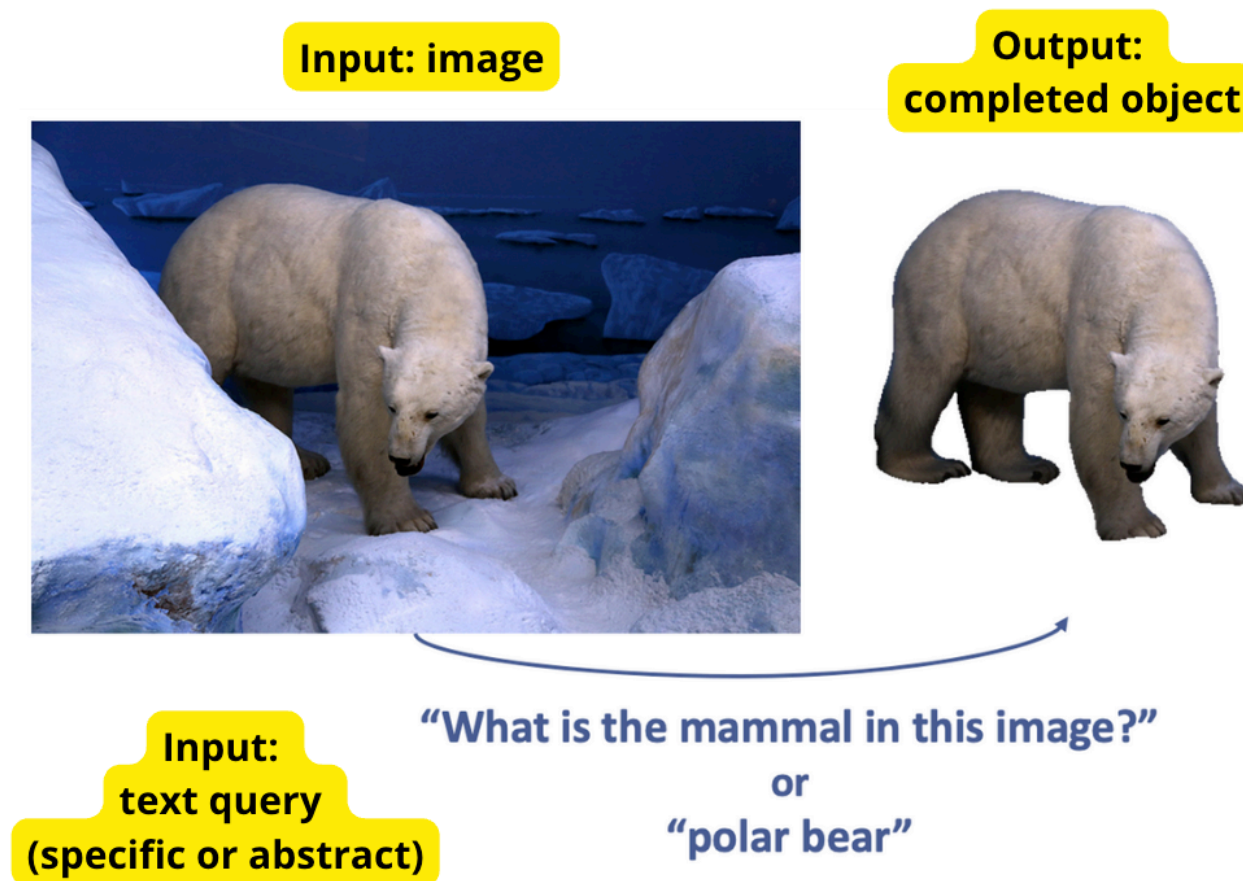


Introduction

Arbitrary Object, Flexible Text Query, Training-free



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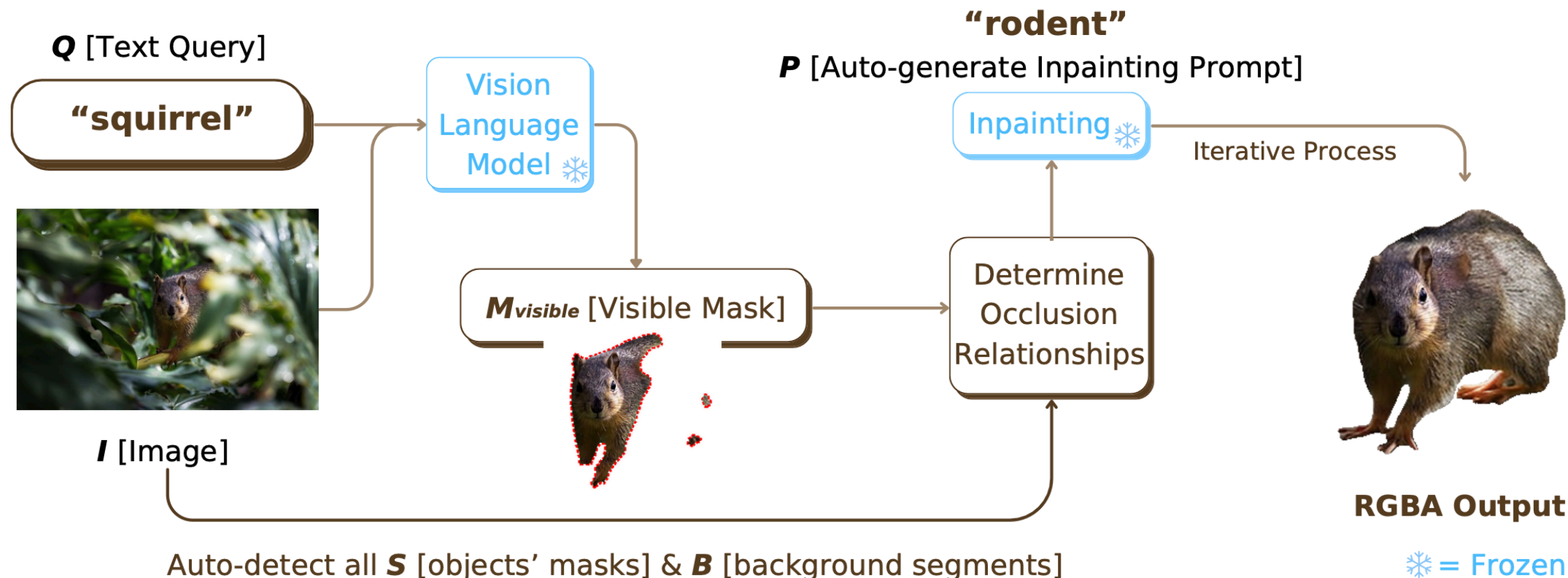


Methodology

Auto-generate Pipeline



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Methodology

Background matters



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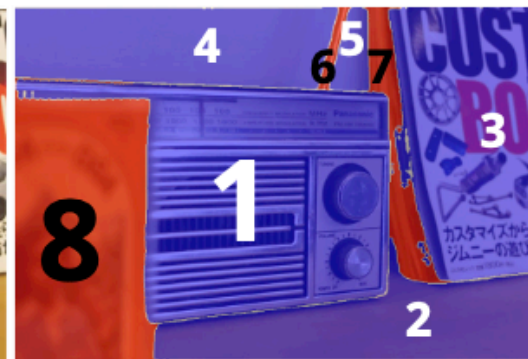
Image



Completion with
Background Segments



Object masks (blue) &
Background segments (red)



Completion without
Background Segments

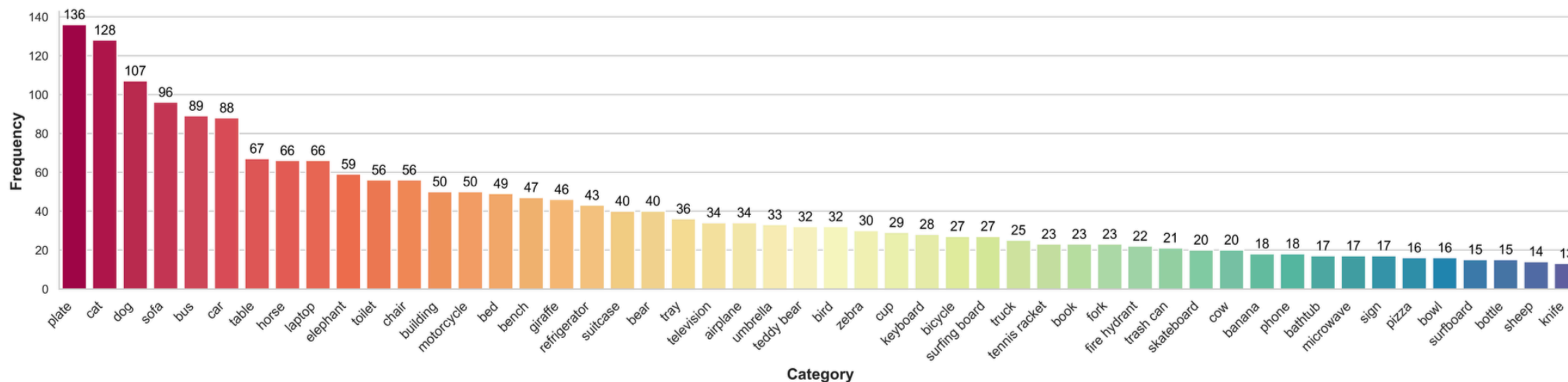


Evaluation Dataset



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Distribution of the Top 50 most frequent categories in our **new** evaluation dataset



Human Preference Study



Target: elephant



A



B



C



D

Example question from the human study.

Participants were instructed to select the version that **best reconstructed** the target object.

Human Preference Study

Results across four different sources



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The percentage of participants who preferred each method's amodal completion results.

| Dataset/ Method | VG | COCO-A | Free Image | LAION | Overall |
|--------------------|---------------|---------------|---------------|---------------|---------------|
| PD w/o MC | 16.62% | 15.38% | 15.80% | 11.49% | 15.78% |
| PD-MC | 15.51% | 14.20% | 12.99% | 9.42% | 14.41% |
| Pix2gestalt | 26.56% | 31.24% | 21.29% | 31.83% | 27.95% |
| Ours | 41.32% | 39.17% | 49.93% | 47.27% | 41.86% |

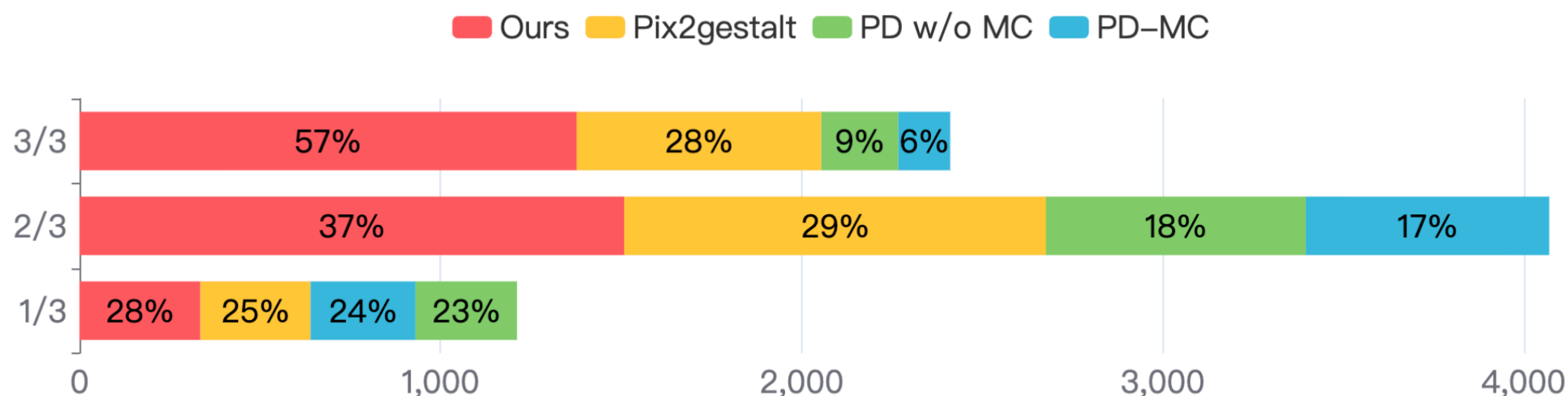
Human Preference Study

Results across four different sources



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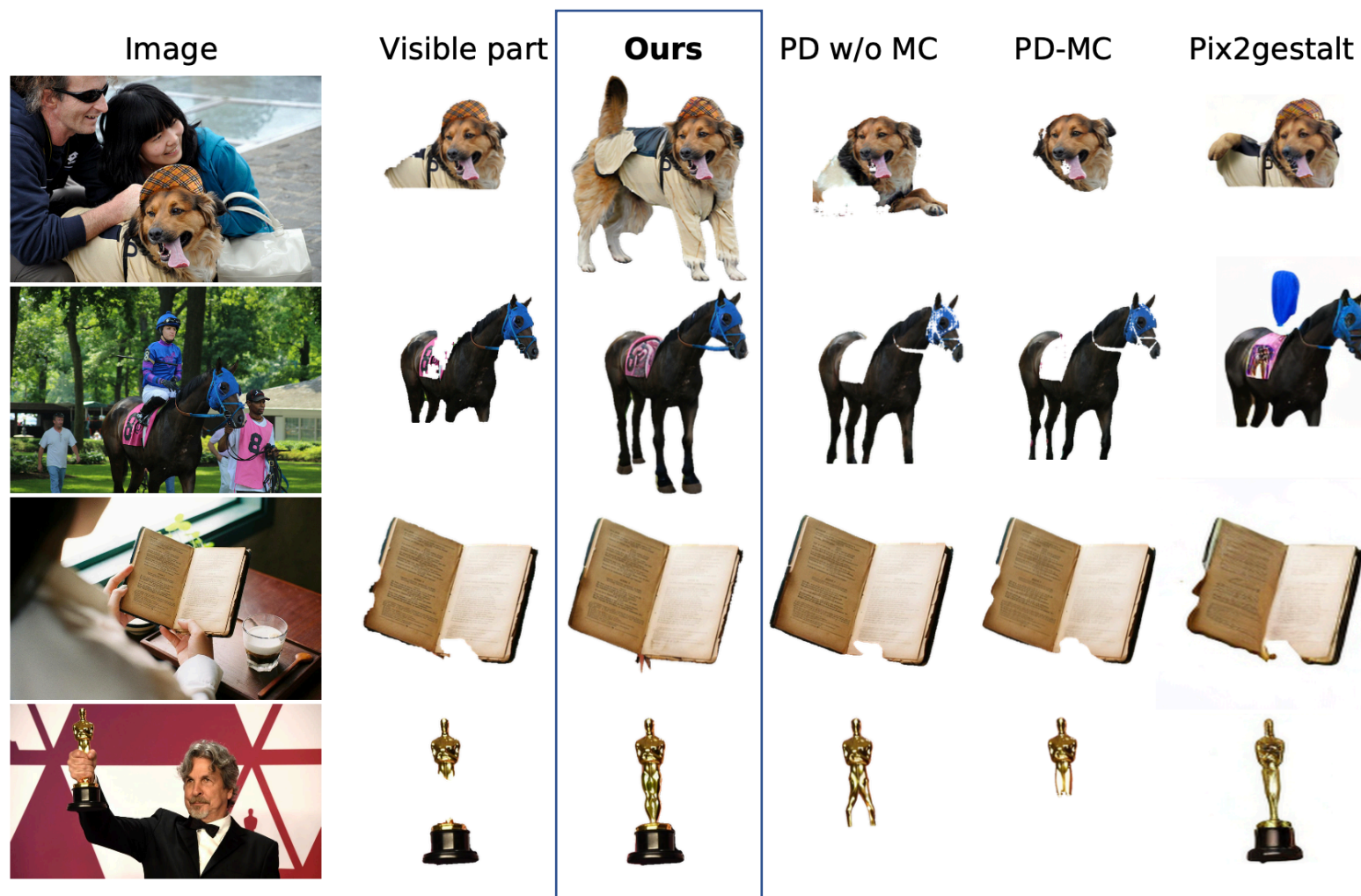
Model preference of human evaluators by agreement levels. X-axis shows the number of images. 3/3 denotes full agreement among three evaluators per image, 1/3 indicates no consensus.



Results - Visual comparisons



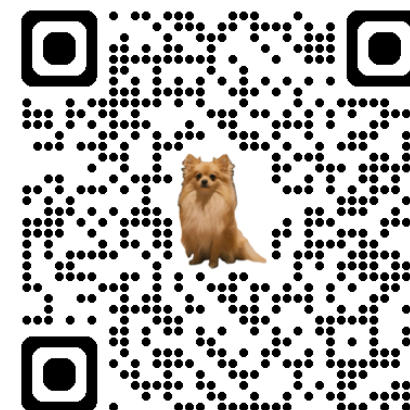
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Open-World Amodal Appearance Completion

THANK YOU!



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