



# Visual & Geometric Intelligence Lab

Dept. of Computer Science Engineering  
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Website

## Lab info.



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### ■ Research Interests

- 3D Reconstruction
- Scene Perception
- Image Synthesis
- Various Computer Vision Topics 😊

### ■ Research Collaboration (2024.11)

- MIT, UCSD
- Adobe
- Google Deepmind
- Microsoft
- Hyundai Motor Group

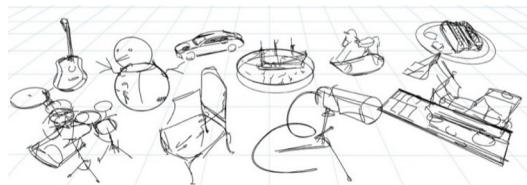


5 Ph.D, 8 Integrated, 2 M.S. students

We are looking for self-motivated  
students for the internship!

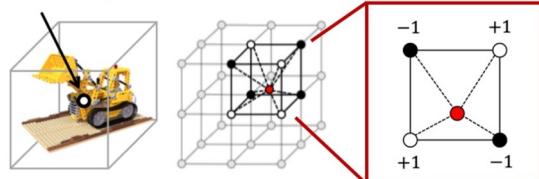


## 3D Reconstruction and Recognition



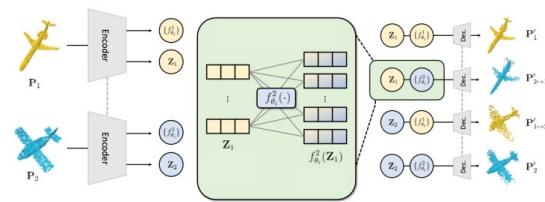
3Doodle (SIGGRAPH 2024)

- Abstracting 3D scenes with line strokes



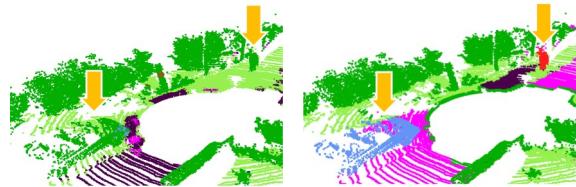
Binary Radiance Fields (NeurIPS 2023)

- A storage-efficient radiance field representation (~1MB)



SO(3) Invariant Features (CVPR 2024)

- Finding geometric correspondences of two objects



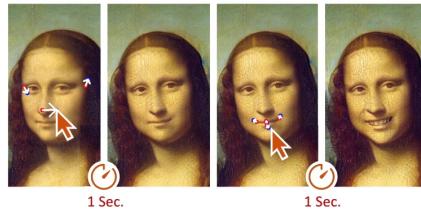
LiDomAug (CVPR 2023)

- Simple & realistic augmentation for sensor-biased LiDAR segmentation

## Image Generation & Editing

InstantDrag  
(SIGGRAPH Asia 2024)

- 60x faster diffusion-based image editing



Diffusion2GAN (ECCV 2024)

- Distilling large scale text-to-image model to GANs

GigaGAN (CVPR 2023)

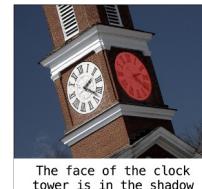
- Matches SOTA DPMs
- 4K Upsampler

StudioGAN (TPAMI 2023)

- GANs implementation
- Comprehensive benchmark
- Open-source library (3.4k⭐)



A man kneeling with his hand on the handle of the bat



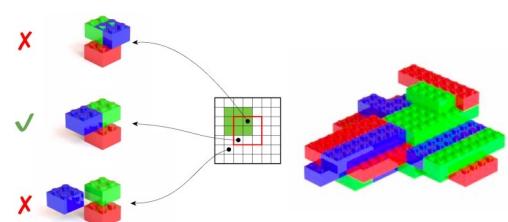
The face of the clock tower is in the shadow



Widest glass vase

RISCLIP (NAACL 2024)

- Referring Image Segmentation
- Multi-modal (text-image) network
- Inter-instances relations understanding



Brick Assembly (TMLR 2024)

- Assembling bricks for making a shape
- Considering geometric constraints and # of bricks