

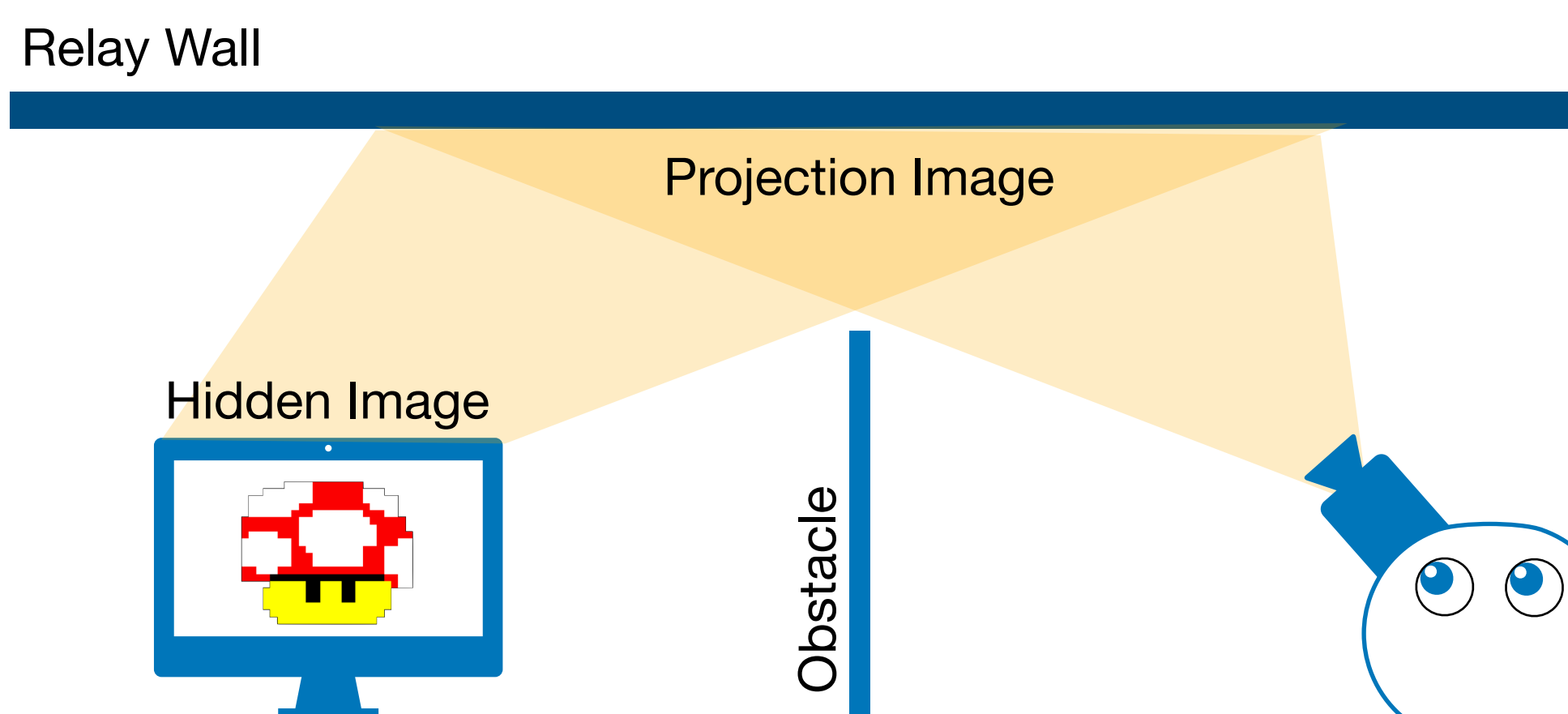
# DiffuSight: Seeing Around Corners with Diffusion Models

Amirmojtaba Sabour

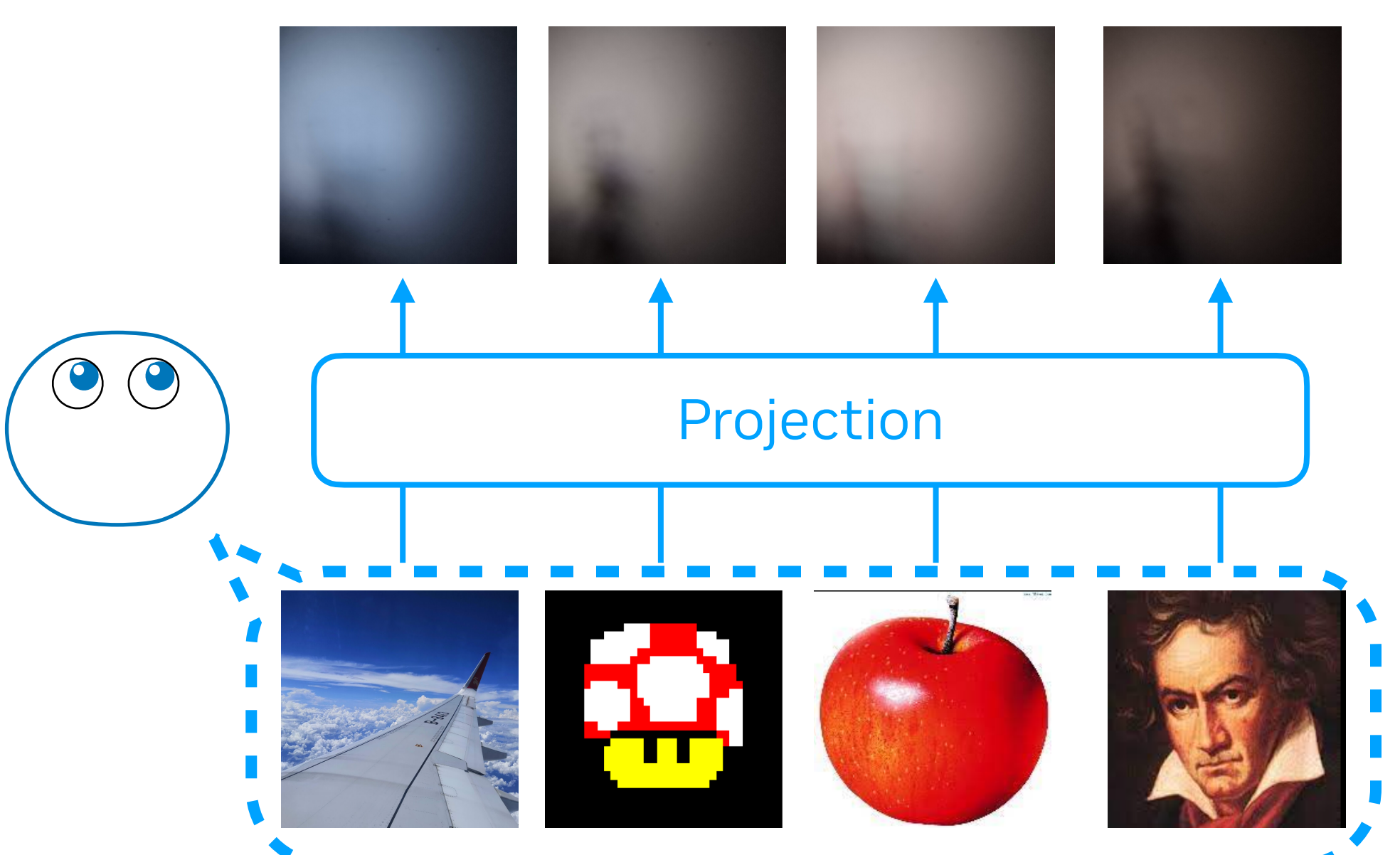
## Motivation

Is it possible to see around corners by looking at a reflection off a wall?

- The reflection tells us little to nothing
- The algorithm *must* hallucinate

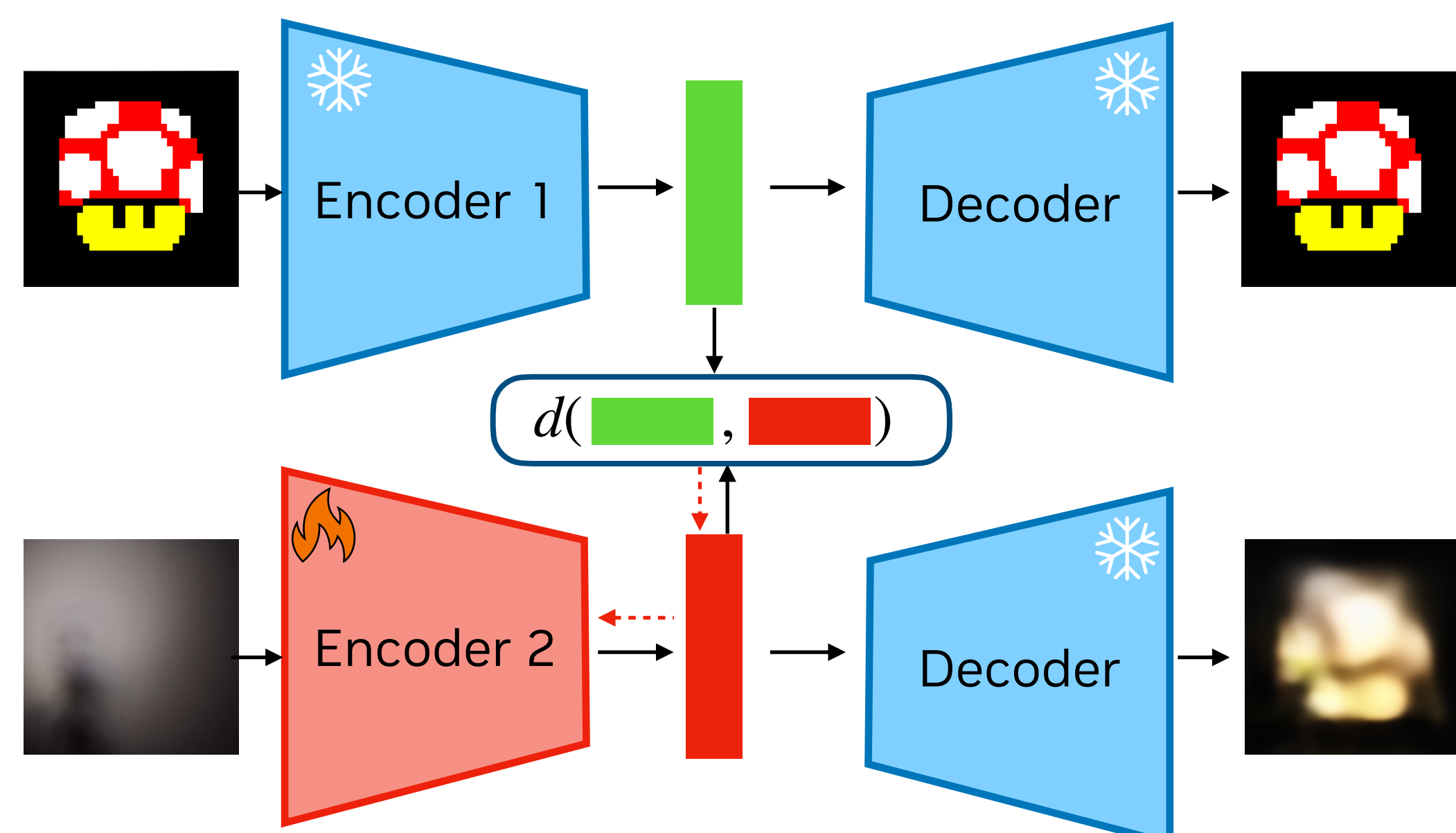


## Much of the information is lost



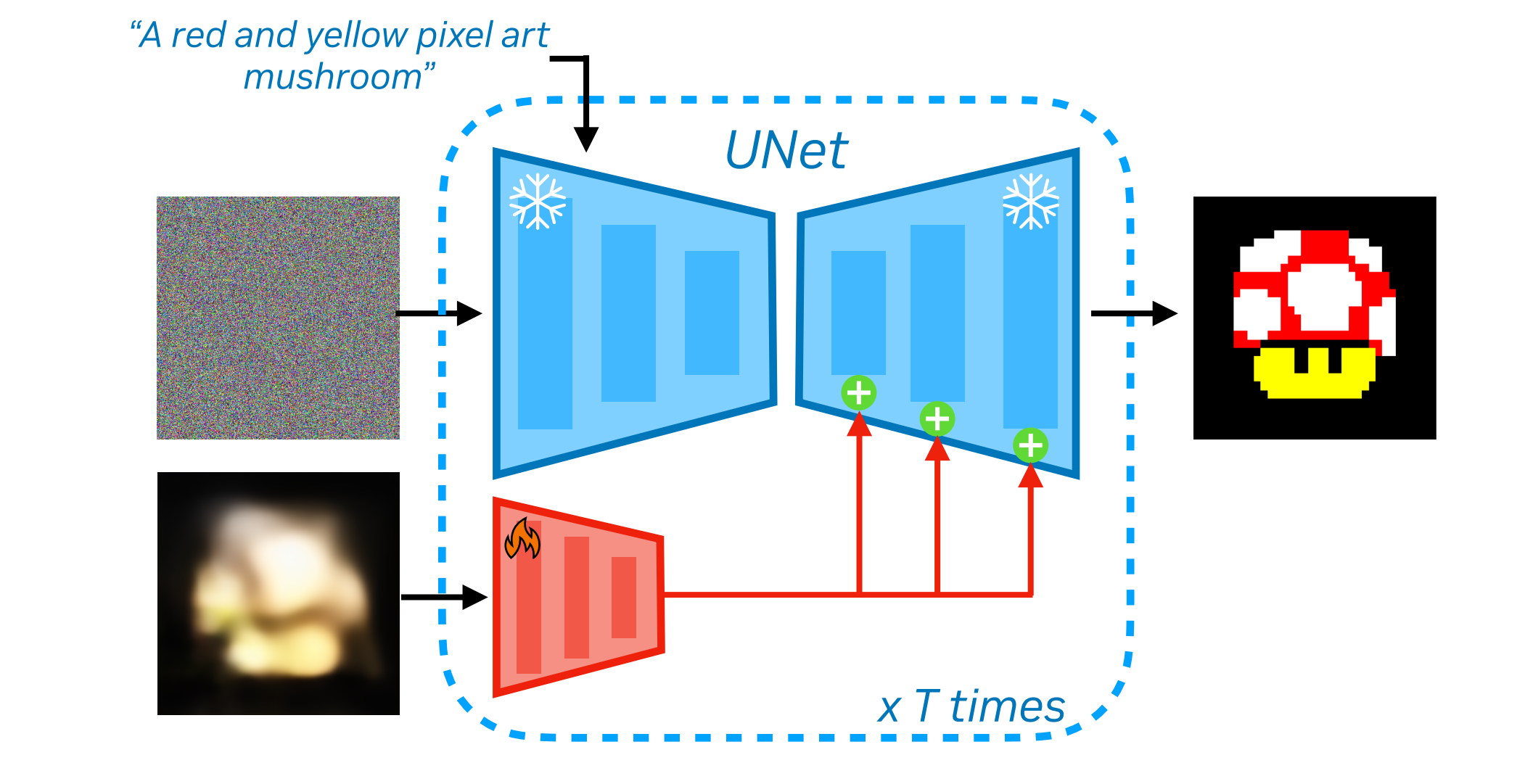
## Step 1) Reconstruct. Step 2) Enhance.

**Reconstruction network:** A new encoder is trained that maps the projections to the same latent space as StableDiffusions VAE.



**Enhancer Network:** A ControlNet is trained to hallucinate the details.

"A red and yellow pixel art mushroom"



## Experimental Results

**Qualitative comparisons:**

|         | Projection | Reconstruction | OURS | Ground Truth |
|---------|------------|----------------|------|--------------|
| Image 1 |            |                |      |              |
| Image 2 |            |                |      |              |
| Image 3 |            |                |      |              |
| Image 4 |            |                |      |              |
| Image 5 |            |                |      |              |

