



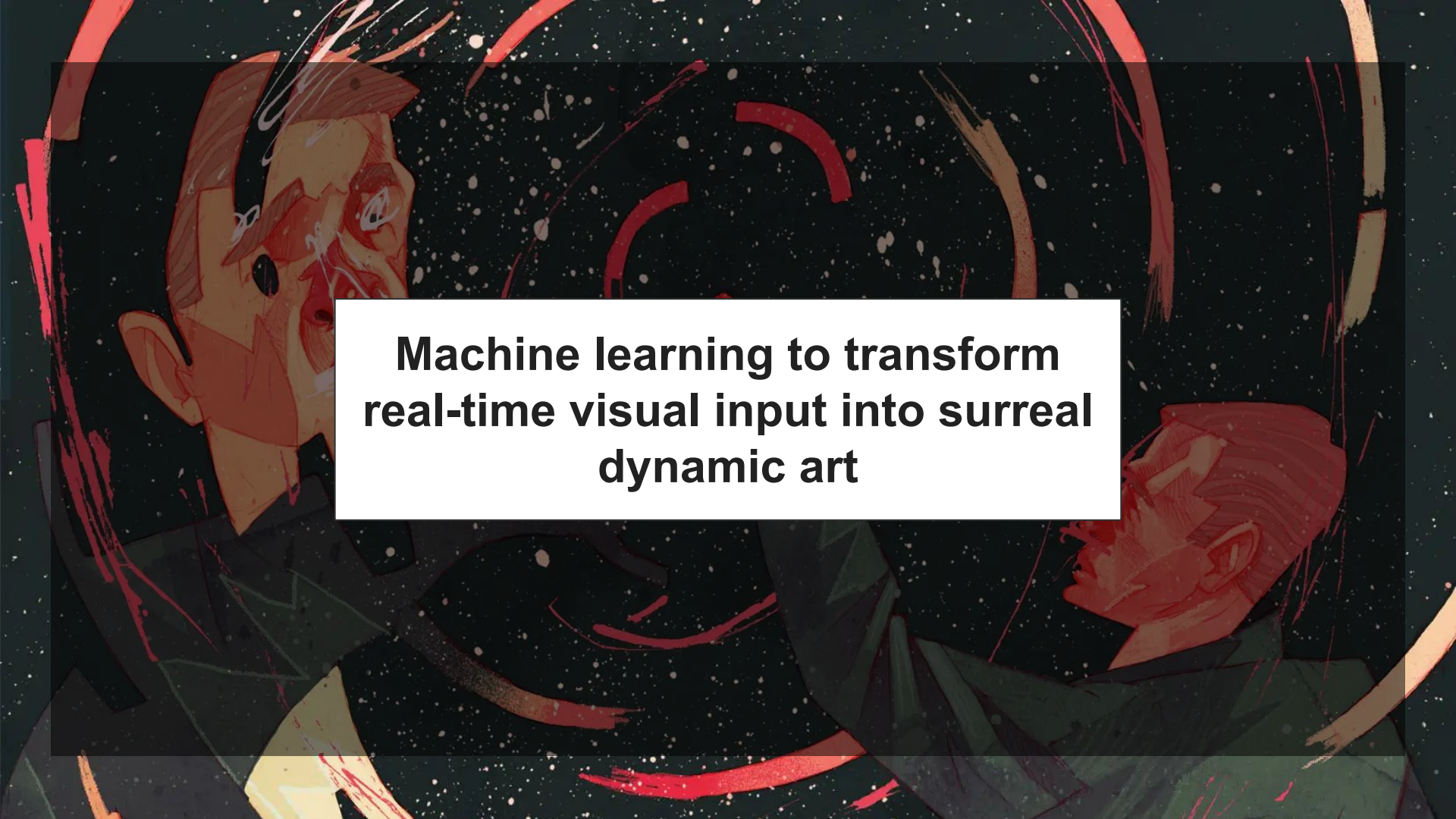
THE NEURAL MIRROR

By Ngoc Hoang, Fatima Nadeem



THEMES

- **Human vs Machine perception**
 - ◆ Evoke questions on identity and self-image
- **Extend the boundaries of art and technology**
 - ◆ Challenge what is acceptable creative expression by merging human and machines

The background is a complex, abstract digital artwork. It features two stylized, angular faces in shades of orange and red, one on the left and one on the right, both appearing to be in a state of intense emotion or distress. The faces are set against a dark, starry space background. Swirling around the faces are thick, expressive brushstrokes in red, orange, and yellow, creating a sense of dynamic movement. The overall composition is highly stylized and surreal, with a focus on bold colors and sharp geometric shapes.

**Machine learning to transform
real-time visual input into surreal
dynamic art**

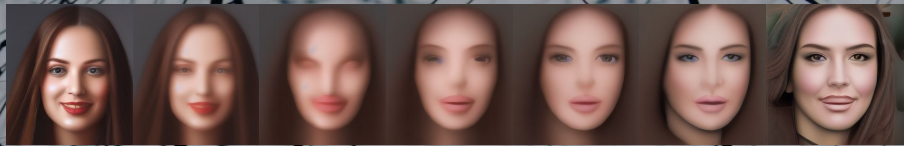
Capture frame_0



Capture frame_1



Display output frames



Send to server

Respond to interface

$$\begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}$$

latent_0

$$\begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}$$

latent_1

Latent representations generation

$$\begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}, \begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}, \dots, \begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}$$

Frame interpolation

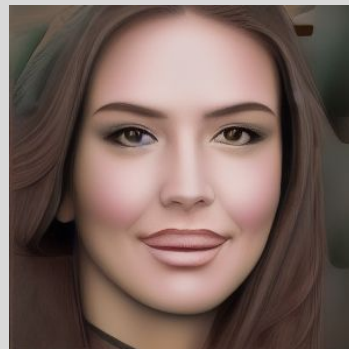
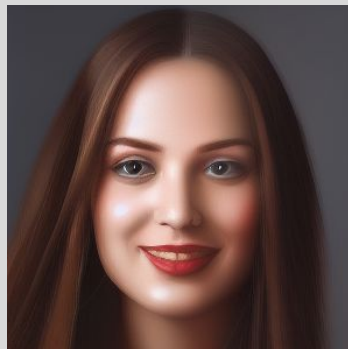


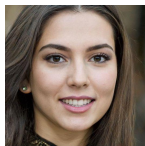
Image denoising + decoding



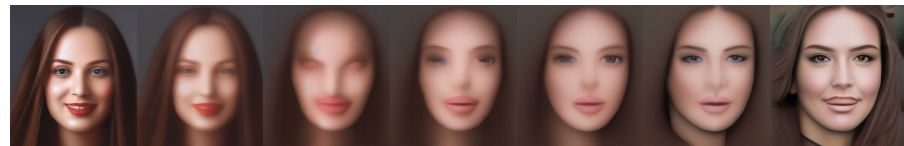
Capture frame_0



Capture frame_1



Display output frames



Send to server

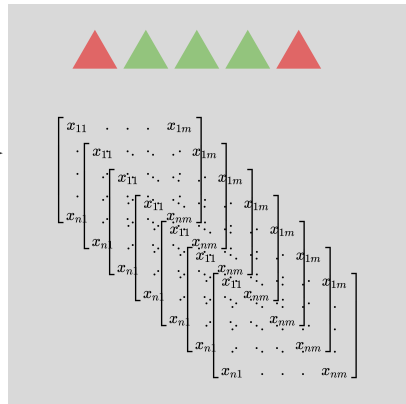
$$\begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}$$

latent_0

$$\begin{bmatrix} x_{11} & \dots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nm} \end{bmatrix}$$

latent_1

Latent representations generation



Frame interpolation

Respond to interface

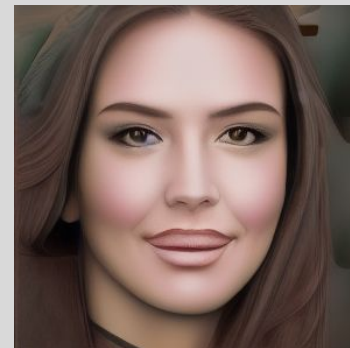
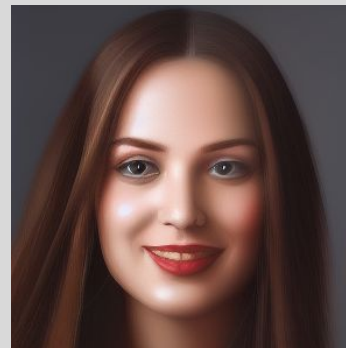
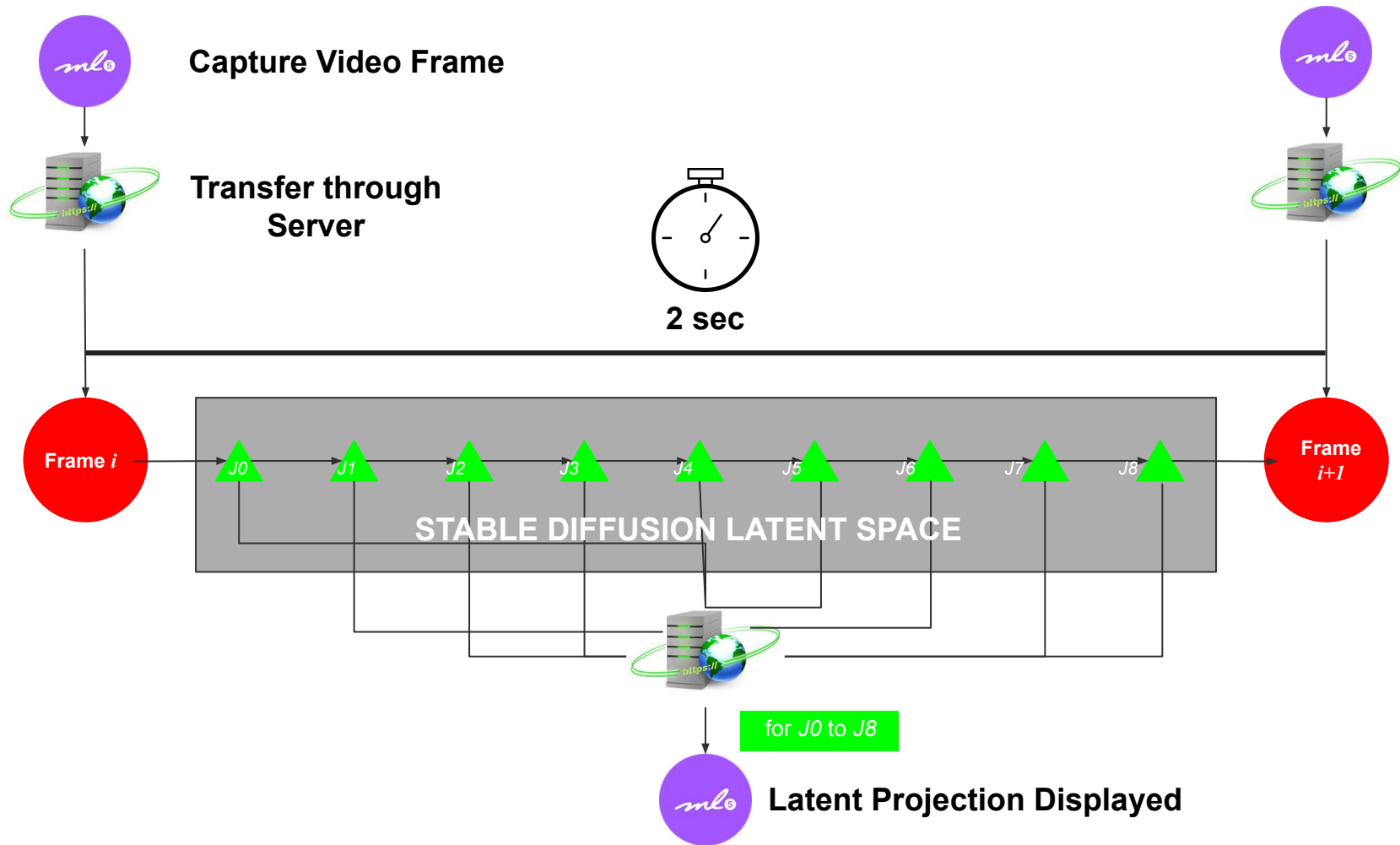


Image denoising + decoding



Flask



Ctrl + C Keyboard Interrupt