

Editable 3D Avatar

Supervisor: Hsuan-I (Sean) Ho

How to apply:

SiROP or E-mail hohs@ethz.ch

Please make sure you attach your CV, transcript of records, and a short introduction to the application.



Short Video



Apply on SiROP

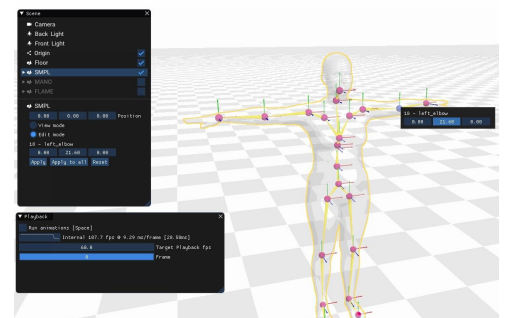
Introduction:

Creating 3D avatars is essential for applications like 3D games, animations, and Metaverse, yet it also requires specific knowledge and significant manual efforts. With the recent advances in 3D capturing and reconstruction, various 3D avatars can be obtained from daily-life videos or even a single photo. However, how to easily incorporate control signals, such as image-based guidance, to personalize high-quality 3D avatar that fulfill users' needs is still an open research question.

Available topics:

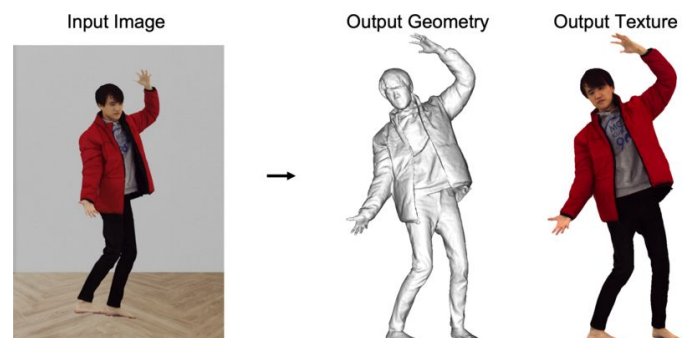
Engineering focus:

- Automatic avatar editing pipeline
- Interactive user interface design on a 3D viewer (*)
- High-resolution and fine-grained avatar editing



Research focus:

- Avatar creation from a single photo
- Avatar editing using 2D generative priors
- Data augmentation with diffusion models
- 3D diffusion models for human



Preferred Qualifications:

- Understanding of 3D Computer Vision/Graphics fundamentals.
- Experience developing software for Machine Learning, Computer Graphics, Computer Vision, or Robotics applications.
- Experience with deep learning model design and development in PyTorch.
- Self-motivation and ability to work independently.
- Passion for learning cutting-edge technology and knowledge

(*) Check out this cool 3D viewer we are using <https://eth-ait.github.io/aitviewer/>