Research Interests

Thank you for reading my research statement! I would love to share with you my personal interests in computer vision.

My personal interests can be divided into two parts. First is 3D computer vision, especially for techniques in 3D reconstruction, VR and AR. I am a crazy fan of video game and sci-fi movie, where plenty of real, high-quality 3D objects and land scenes are required. These models not only cost a lot of money, which may not be affordable for some startup, but are also very time-consuming. Thus, rapid 3D reconstruction is of great vital for the development of entertainment industry. Besides, for VR/AR, motion capture and SLAM are necessary and still have enough potential. Till now, VR/AR techniques with fancy effects and useful functions only exist in sci-fi movies. It will be an excellent job to research on these areas and bring those techniques into real life. Making contribution to the things you like is awesome, and I will be great happy if my further work can help the development of the entertainment industry and VR\AR.

Then the second one is image texture synthesis. Texture synthesis is one of the most creative job I have seen. I was greatly surprised when I saw the amazing results of style transform at the first time. There are so many areas where image texture synthesis can help, like style transform, high resolution, image inpainting and extrapolation, etc. Besides, generative adversarial network brings plenty of unbelievable but also hard-to-control algorithms recently. I am really interested in how to control GAN to generate high-quality images. I like art, painting and photography, so I would love to work in image texture synthesis for my PhD life.

I have respectively made some demos and experiments on these two fields. I participated in research in my undergraduate study on 3D model retrieval and made one demo for single image reconstruction. For texture synthesis, I implemented some publications and now working on my master project related to texture synthesis. More projects can be found in my github and personal home page.

Thank you again for reading my research interests. Looking forwards to hearing from you.