Personal Information

Name： Wenlin Zhuang　　Gender： Male

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Degree： Master　　Email：wlzhuang04@gmail.com

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Expected： Algorithm Researcher/Engineer

Education

- 2018. 9—2021.6　Southeast University　Master
- 2014. 9—2018. 6　Southeast University　Bachelor

Experiment (Internship)

- 2020. 6—　Alibaba Damo Academy　Expecting
- 2020. 3—2020.6　Tencent AI Lab　Intelligent choreography
- 2019. 7—2020.1　Xmov　Human motion control; Dance synthesis

Skill

- Python
  Computer Vision, Computer Graphics, Machine Learning
- Others
  Blender, MotionBuilder
  PyTorch
  C++ for image processing
  Linux/Windows , Git

Project

- **Music-driven Dance Synthesis** **Xmov 2019.07-2020.02**

  Computer Graphics；Motion&Animation

  ✧ Proposed a novel autoregressive generative model, DanceNet, to take the style, rhythm and melody of music as the control signals to generate 3D dance motions with high realism and diversity.

  ✧ Captured several synchronized music-dance pairs by professional dancers, and build a high-quality music-dance pair dataset.

- **3D Dance Synthesis and Control** **Southeast University 2020.01-2020.03**

  Computer Graphics；Motion&Animation

  ✧ Proposed a novel generative motion model based on temporal convolution and LSTM, Temporal

Convolution-LSTM (TC-LSTM), to synthesize realistic and diverse dance motion.

- ✧ Introduced a unique control signal, the dance melody line, to heighten controllability.

- **Intelligent Choreography** **Tencent AI Lab 2020.03-2020.06**

Computer Graphics； Motion&Animation

- ✧ Maintained existing retrieval-based dance synthesis method.
- ✧ Proposed an intelligent choreography method based on GAN. The generator is an autoencoder based skeleton-aware convolution. The discriminator is a multi-scale model based skeleton-aware convolution.

- **Human Motion Synthesis and Control** **Xmov 2019.07-2020.01**

Computer Graphics； Motion&Animation

- ✧ Proposed a motion generative model based on temporal convolution.
- ✧ Achieved multi-applications: motion prediction/random synthesis, motion denoising, motion completion, motion control, motion style transfer.

- **Human Pose Estimation** **Southeast University 2018.01-2018.07**

Computer Vision； Human Pose

- ✧ Adaptive heatmap: the kernel size of the heatmap should be adjusted according to the human body size of the image.
- ✧ Skeleton information: Multi-scale learning of limb region can make the model skeleton-aware.

- **Motion Retargeting** **Southeast University 2018.07-2019.01**

Computer Graphics； Motion&Animation

- ✧ Proposed a Motion Increment Model based RNN.
- ✧ Built a Mixamo-retarget pair dataset through MotionBuilder and manual repair.

- **Human 3D Reconstruction** **Southeast University 2019.01-2019.05**

Computer Vision; Computer Graphics； 3D Reconstruction

- ✧ Learn about human reconstruction with clothing.
- ✧ The method of human reconstruction without clothing, UV Position Map.

Papers and Patents

- Papers

- ◇ **Wenlin Zhuang**， Conyi Wang, Siyu Xia, Jinxiang Chai, Yangang Wang. Music2Dance: DanceNet for music-driven dance generation. **arxiv2020**
- ◇ **Wenlin Zhuang**， Yangang Wang, et al. Towards 3D Dance Motion Synthesis and Control. **Arxiv2020**
- ◇ **Wenlin Zhuang**， Cong Peng, Siyu Xia, Yangang Wang. Multi-scale Adaptive Structure Network for Human Pose Estimation from Color Images. **ACCV 2018**

◇ **Wenlin Zhuang**, Tianshu Zhang, Siyu Xia, Yangang Wang. DeepRetarget: Deep Learning based Motion Increments Model for Motion Retargeting. **Submit to Journal**

◇ Shuaiying Hou, Weiwei Xu, **Wenlin Zhuang**, Yangang Wang, et al. MotionNet: A Deep Generative Model for Motion Modeling and Synthesis.

- Three published national invention patents

Activities and awards

- 2019 National Scholarship
- 2018 Outstanding Graduate
- 2016 Excellent Student Leader
- 2016 Vice Chairman of the Student Union
- SRTP 25+ (2 points for graduation, 6 points for excellent)