Choreography composed by Deep Learning

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We constructed a dataset to generate dance, examined the characteristics of choreography using Deep Learning by generating dance using existing network and actually dancing. Recently, the study of motion “prediction” and motion “synthesis” is proceeding, and the study of motion “generation” is progressing gradually. Traditional approaches of motion prediction include bilinear spatio temporal basis models, hidden Markov models, Gaussian process latent variable models, linear dynamic models, restricted Boltzmann machines, etc. Recently, these studies using Deep Learning have progressed. However, the purpose is to "predict" the movement, so no variations will be created in the generated motion. In addition, in studies that motion synthesis, there are many studies that synthesize the body by parts of the user separately for each part, with the aim of generating innovative movements and choreography, which has never been before, but without the user's help the system cannot generate completely independently. Furthermore, in studies that motion generation, a database-driven framework such as motion graph, which is based on simulation-based technology and use of large-scale human motion capture data, has been proposed, and recently RNN, GAN methods using Deep Learning are also performed. However, the number of dance motion datasets is still small, and the genres of dances that can be generated are restricted. Also, the generated dance has been studied only as a physical motion, and it has not been studied much from the viewpoint of "choreography". Therefore, we constructed a dataset by collecting and analyzing the movie "Me Dancing" that the general people on the Web dance, and generated dance using the auto-conditioned Recurrent Neural Network (acRNN) and examined by actually dancing it for the first-time what kind of effect it has in choreography to generate dance by Deep Learning.

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