ABSTRACT

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THREE DIMENSIONAL POSE ESTIMATION FROM MONOCULAR IMAGE USING DEEP NEURAL NETWORK

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(xiv + 43 + attachments)

Digital technologies have been developed rapidly in application and science may produce digital track records that are actually useful. Digital data are available in a huge number and are predicted to increase. One way to utilize this data is to create a mapping function that finds a correlation between domains from the data itself as a reference. Digital data in form of sequence of images or videos are latent which mean data itself has some hidden semantic meanings. This research is about making a mapping function that maps two dimensional images into three dimensional human pose keypoints using deep neural network modeling. The software is built in steps that involve data preprocessing, model architecture design, self-traning deep neural network, and visualization. The model consists of some blocks of residual networks that sum up its inputs and outputs. The result from testing explains that the theories and data are correct and runs correctly using new data as input.

Bibliography (1986-2020)