

ABSTRACT

Human activity forecasting has been applied to various systems recently and it becomes the popular one among the researches nowadays. By inferring and extending the current activity analysis scope through the model to reason about future actions. Human activity forecasting is necessarily applied in particular scenes (e.g. surveillance systems, human-computer interfaces). Even the Understanding concept of human preference with respect to physical scene features enables to perform better but the difficulties in increasing the accuracy when forecasting with the image containing of obstacle like car still remains concerned.

This activity forecasting algorithm are modeled of physical environment based on human actions with state-of-the-art semantic understanding and the optimal control. As the main of this research is focused on trajectory-based activity analysis. In the research, we propose a method to improve the accurate over the Kitani research by changing the Softmax function to Exponential Linear Units (ELUs) and Sigmoid functions instead in order to solve problem above.

To modify and evaluate the proposed algorithms, the Kitani databases are applied which consists of 14 images. As the result, there are some improvements and become more accurate for the data with the obstacle to forecast the human trajectories respectively. Therefore, it can be concluded that the efficacy of the two proposed approaches achieves significantly better accurate with 57% than the original one.

Keywords: Human activity forecasting, softmax function, ELUs, Sigmoid function, optimal control, semantic scene understanding.