FA-TING HONG

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RESEARCH INTERESTS

- Computer Vision: important people detection, video highlight detection, action recognition

EDUCATION

Sun Yat-sen University   *Aug. 2018 - <u>Jul. 2021</u>*

- M.Sc. in Computer Science and Technology

- Research area: computer vision. Supervisor: Prof. Wei-Shi Zheng.

- Graduate Time: July 2021

South China University of Technology   *Aug. 2014 - Jul. 2018*

- B.Sc in Computer Science and Technology

- Research area: SLAM of Robot. Supervisor: Prof. Sheng Bi.

PUBLICATIONS

- **<u>Fa-Ting Hong</u>, Xuan-Teng Huang, Wei-Hong Li and Wei-Shi Zheng. MINI-Net: Multiple Instance Ranking Network for Video Highlight Detection. In European Conference on Computer Vision, 2020.**

  We propose to cast such weakly supervised video highlight detection modeling for a given specific event as a multiple instance ranking network (MINI-Net) learning. The bag modelling in our multiple instance ranking network (MINI-Net) particularly solves the difficulty of localization of highlight segments of a specific event during training, because MINI-Net works on bag level, where it is only required to ensure a positive bag having a highlight segment of that event and a negative bag having no highlights.

- **<u>Fa-Ting Hong</u>, Wei-Hong Li and Wei-Shi Zheng. Learning to Detect Important People in Unlabelled Images for Semi-supervised Important People Detection. In Computer Vision and Pattern Recognition, 2020.**

  In this work, we study semi-supervised learning in the context of important people detection and propose a semi-supervised learning method for this task. Our approach iteratively learns to assign pseudo-labels to individuals in un-annotated images and learns to update the important people detection model based on data with both labels and pseudo-labels. To alleviate the pseudo-labeling imbalance problem, we introduce a ranking strategy for pseudo-label estimation, and also introduce two weighting strategies: one for weighting the confidence that individuals are important people to strengthen the learning on important people and the other for neglecting noisy unlabelled images.

- **Wei-Hong Li[*], <u>Fa-Ting Hong</u>[*], and Wei-Shi Zheng. Learning to Learn Relation for Important People Detection in Still Images. In Computer Vision and Pattern Recognition, 2019.** ([*]Equal Contribution)

  In this work, we propose a deep imPOrtance relatIon NeTwork (POINT) that combines both relation modeling and feature learning. In particular, we infer two types of interaction modules:

the person-person interaction module that learns the interaction between people and the event-person interaction module that learns to describe how a person is involved in the event occurring in an image. We then estimate the *importance relations* among people from both interactions and encode the relation feature from the importance relations.

- **Ling-An Zeng, <u>Fa-Ting Hong</u>, Wei-Shi Zheng, Qi-Zhi Yu, Wei Zeng, Yao-Wei Wang, and Jian-Huang Lai. Hybrid Dynamic-static Context-aware Attention Network for Action Assessment in Long Videos. Proc. of ACM International Conference on Multimedia (ACM MM), 2020.**

- **Liang, Y., <u>Hong, F.</u>, Lin, Q., Bi, S., & Feng, L. (2017, July). Optimization of Robot Path Planning Parameters Based on Genetic Algorithm. In 2017 IEEE International Conference on Real-time Computing and Robotics (RCAR) (pp. 529-534). IEEE.**

AWARDS

- Chinese National Inspirational Scholarship(3/160), by Minister of Education of China, 2015

- Chinese National Inspirational Scholarship(5/160), by Minister of Education of China, 2016

- Chinese National Scholarship (1/160), by Minister of Education of China, 2017

- First-class Scholarship for Graduate Students, by Graduate School of Sun Yat-sen University, 2019

PROJECT

National Innovation and Entrepreneurship Project   *2016 - 2018*

- Title: Research on Robot Autonomous Navigation Based on Lidar

- Role: Team leader

- Duties included: I mainly do research on the local path planning of the robot, which makes the robot can avoid obstacles and walk more smoothly in different environments. In particularly, we use genetic algorithms to search an optimal parameter set, so that the robot makes the ideal behavior in a specific environment.

- Project Acceptance Evaluation: Excellent.