YANG ZHAO

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SUMMARY

Have 3 papers published and 5 papers under review.

Research interest includes but not limited to: Person Retrieval (Person Re-identification); Fine-Grained Classification; Facial Landmark Detection.

EDUCATION

Ph.D., Artificial Intelligence, Griffith University (jointly with the University of Adelaide) *since 2018*

B.S. & M.S., Computer Science, Wuhan University of Technology *2009-2018*

MAIN PROJECT EXPERIENCE

Person Retrieval (Person Re-identification):

1) Introduced a novel identity-guided human region segmentation method that can predict informative region segments, enabling discriminative region representation learning for person retrieval. Submitted to CVPR 2021.

(2019-2020)

2) Introduced an improved triplet loss that encourages positive pairs as close as possible and penalizes negative pairs proportional to their distances for effective person retrieval. Submitted to PR.

(2018-2019)

Fine Grained Visual Categorization:

1) Introduced a self-supervised module that randomly erases semantic parts and predicts contextual position of the erased parts for FGVC. Submitted to IJCAI 2021.

(2020-2021)

2) Proposed a novel loss function that encodes part self-similarity to segment parts and identify objects using only image-level labels for FGVC. Submitted to CVPR 2021.

(2020-2021)

3) Developed the largest ultra-FGVC dataset (over 47,000 images) and evaluated extensive STOAs as baselines to motivate further research on ultra-FGVC. Submitted to CVPR 2021.

(2020-2021)

4) Developed a data augmentation method to mitigate overfitting and thus enhance generalization capability for FGVC. Submitted to PR.

(2019-2020)

5) Proposed a mathematics transform to simultaneously characterize contour and structure features for FGVC. Accepted in AAAI 2020.

(2018-2019)

Facial Landmark Detection:

1) Introduced a lightweight and effective knowledge distillation method for facial landmark detection. Accepted in PR.

(2018-2019)

PUBLICATIONS

- **Zhao, Y.**, Liu, Y., Shen, C., Gao, Y., & Xiong, S. (2020). MobileFAN: transferring deep hidden representation for face alignment. *Pattern Recogn., 100, 107114*.
- Yu, X., **Zhao, Y.**, Gao, Y., Xiong, S., & Yuan, X. (2020). Patchy Image Structure Classification Using Multi-Orientation Region Transform. In *Proc. AAAI Conf. Artificial Intell. (AAAI)*
- Wang, J., Sun, K., Cheng, T., Jiang, B., Deng, C., **Zhao, Y.**, ... & Xiao, B. (2020). Deep high-resolution representation learning for visual recognition. *IEEE Trans. Pattern Anal. Mach. Intell*.
- **Zhao, Y.**, Shen, C., Yu, X., Chen, H., Gao, Y., & Xiong. S. Learning Deep Person-Aware Embedding for Person Re-Identification. *Pattern Recogn.* (Under the Second Round of Revision)
- Yu, X., **Zhao, Y.**, Gao, Y., & Xiong. S. MaskCOV: A Random Mask Covariance Network for Ultra-Fine-Grained Visual Categorization. *Pattern Recogn.* (Under the Second Round of Revision)
- **Zhao, Y.**, Yu, X., Gao, Y., & Shen, C. Learning Discriminative Region Representation for Person Retrieval. *CVPR2021* (Under Review)
- Yu, X., **Zhao, Y.**, Gao, Y., & Xiong. S. Weakly-Supervised Part Segmentation for Fine-Grained Visual Categorization. *CVPR2021* (Under Review)
- Yu, X., Gao, Y., **Zhao, Y.**, Xiong. S. & Yuan, X. Benchmark Dataset and Evaluation for Visual Classification Beyond Human Performance. *CVPR2021* (Under Review)
- Yu, X., **Zhao, Y.**, Gao, Y. SPARE: Self-Supervised Part Erasing for Ultra-Fine-Grained Visual Categorization. *IJCAI2021* (Under Review)

AWARDS & GRANTS

GU International Postgraduate Research Scholarship *2018-2022*

GU Top-up Scholarship *2018-2022*

SKILLS

Python, Pytorch, OpenCV