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Research Interests

Deep Learning, Medical Image Analysis.

Current projects on medical image segmentation, domain adaptation, and federated learning.

Education

Ph.D. 2016.09 – 2020.09
Department of Computer Science and Engineering
Hong Kong University of Science and Technology
Supervisor: Prof. Kwang-Ting Tim Cheng, Dean of Engineering, HKUST

M.S. 2013.09 – 2016.06, B.S. 2009.09 – 2013.06
School of Electronic Information and Communications
Huazhong University of Science and Technology

Experience

Intern, Visual Computing Group, 2015.06 - 2015.12
Microsoft Research Asia, Beijing, China
Mentor: Prof. Katsushi Ikeuchi

Visiting Student, Information Science and Systems Group, 2014.12 - 2015.04
Department of Electrical and Computer Engineering
Texas A&M University, College Station, Texas, United States
Advisor: Prof. Zixiang Xiong

Selected Publication

Under Revision

Variation-Aware Federated Learning with Multi-Source Decentralized Medical Image Data
Zengqiang Yan, Jeffry Wicaksana, Zhiwei Wang, Xin Yang, Kwang-Ting Cheng
IEEE Journal of Biomedical and Health Informatics (IEEE JBHI), 2020. (under major revision)

Under Submission

Pseudo Pixel-Wise Annotation Guided Image-to-Image Translation for Medical Images
Zengqiang Yan, Xin Yang, Kwang-Ting Cheng
preparing for IEEE Transactions on Medical Imaging (IEEE TMI), 2020.

Journal

Enabling a Single Deep Learning Model for Accurate Gland Instance Segmentation: A Shape-Aware Adversarial Learning Framework

Zengqiang Yan, Xin Yang, Kwang-Ting Cheng

IEEE Transactions on Medical Imaging (IEEE TMI), 2020.

A Three-Stage Deep Learning Model for Accurate Retinal Vessel Segmentation

Zengqiang Yan, Xin Yang, Kwang-Ting Cheng

IEEE Journal of Biomedical and Health Informatics (IEEE JBHI), vol. 23, no. 4, 2019.

Joint Segment-Level and Pixel-Wise Losses for Deep Learning based Retinal Vessel Segmentation

Zengqiang Yan, Xin Yang, Kwang-Ting Cheng

IEEE Transactions on Biomedical Engineering (IEEE TBME), vol. 65, no. 9, 2018.

A Skeletal Similarity Metric for Quality Evaluation of Vessel Segmentation

Zengqiang Yan, Xin Yang, Kwang-Ting Cheng

IEEE Transactions on Medical Imaging (IEEE TMI), vol. 37, no. 4, 2018.

Conference

A Deep Model with Shape-Preserving Loss for Gland Instance Segmentation

Zengqiang Yan, Xin Yang, Kwang-Ting Cheng

MICCAI, pp. 138-146, 2018.

Awards

HKUST Postgraduate Scholarship (2016 – 2020)

Award of Excellence, Stars of Tomorrow Internship Program, MSRA, 2016

HUAWEI Scholarship, 2016

Top 10% Paper Award, IEEE International Workshop on Multimedia Signal Processing (MMSP), 2015

Travel Award, IEEE International Conference on Image Processing (ICIP), 2015

Teaching Experience

COMP 4901L Computer Vision, Teaching Assistant, Fall 2019

COMP 4331 Introduction to Data Mining, Teaching Assistant, Fall 2017, Spring 2018

Last updated: September 10, 2020