Shishuai Hu

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OVERVIEW

Shishuai Hu is currently a Ph.D. candidate in the Shaanxi Provincial Key Laboratory of Speech and Image Information Processing (SAIIP), School of Computer Science and Engineering, Northwestern Polytechnical University (NPU), supervised by Prof. Yong Xia. His research focuses on deep learning techniques for medical image segmentation, with particular interests in domain adaptation. Shishuai has achieved remarkable results in several medical image analysis-related challenges, including the first place in COVID-19 lung CT lesion segmentation challenge 2020, the second place in carotid vessel wall segmentation and atherosclerosis diagnosis challenge 2022, and the second place in kidney parsing challenge 2022.

EDUCATION

Northwestern Polytechnical University — Xi'an, Shaanxi, China
School of Computer Science and Engineering — Sep. 2020 – Present

- Ph.D. Candidate of Computer Science and Technology
- Advisor: Prof. Yong Xia

Northwestern Polytechnical University — Xi'an, Shaanxi, China
Honors College — Sep. 2016 – Jun. 2020

- B.E. in Computer Science and Technology (GPA: 88.2 / 100, Ranking: 33 / 140)
- Thesis: A Study on Kidney Tumor Segmentation on CT Images Using Deep Learning
- Advisor: Prof. Yong Xia

AWARDS AND HONORS

Innovation Award in Kidney Parsing Challenge	Sep. 2022
Second Place in Carotid Vessel Wall Segmentation and Atherosclerosis Diagnosis Challenge	Aug. 2022
Second Place in Kidney Parsing Challenge	Aug. 2022
Top-5 in Multi-Modality Abdominal Multi-Organ Segmentation Challenge	Aug. 2022
Second Prize in MICS Student Presentation Challenge	Aug. 2022
First Place in COVID-19 Lung CT Lesion Segmentation Challenge	Jan. 2021
Second Prize in the Challenge of Segmentation of Pulmonary Tissues in the 4th ISICDM	Dec. 2020
Third Prize in the Challenge of Acceleration of MR Imaging in the 4th ISICDM	Dec. 2020
University Graduate Fellowship, Northwestern Polytechnical University	Sep. 2020, Sep. 2021
MICCAI Undergraduate Student Travel Award	Aug. 2019
Honors College Scholarship, Northwestern Polytechnical University	Sep. 2019, Sep. 2018, Sep. 2017

PUBLICATIONS

[1] S. Hu, Z. Liao, and Y. Xia. "**Domain Specific Convolution and High Frequency Reconstruction based Unsupervised Domain Adaptation for Medical Image Segmentation.**" Medical Image Computing and Computer Assisted Interventions (MICCAI'22), 2022.

[2] S. Hu, Z. Liao, J. Zhang, and Y. Xia. "**Domain and Content Adaptive Convolution based Multi-Source Domain Generalization for Medical Image Segmentation.**" IEEE Transactions on Medical Imaging (IEEE-TMI), 2022.

[3] S. Hu, J. Zhang, and Y. Xia. "**Boundary-Aware Network for Kidney Tumor Segmentation.**" Machine Learning in Medical Imaging (MLMI'20), 2020.

[4] S. Hu, Z. Liao, and Y. Xia. "**ProSFDA: Prompt Learning based Source-free Domain Adaptation for Medical Image Segmentation.**" Preprint, 2022.

[5] Z. Liao, Y. Xie, S. Hu, and Y. Xia. "**Learning From Ambiguous Labels for Lung Nodule Malignancy Prediction.**" IEEE Transactions on Medical Imaging (IEEE-TMI), 2022.

[6] Z. Liao, S. Hu, Y. Xie, and Y. Xia. "**Modeling Human Preference and Stochastic Error for Medical Image Segmentation with Multiple Annotators.**" Preprint, 2021.

REFERENCES

■ Yong Xia, Professor, Northwestern Polytechnical University; **yxia@nwpu.edu.cn**