Yaolei Qi

Research interests: Computer vision, Medical image processing, Network design

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EDUCATION

Combined Master & Ph. D of Southeast University **2019.09 - 2021.06 & 2021.09 - present**

- Major in deep learning-based medical image processing, especially in the coronary vascular analysis.
- First-Class Academic Scholarship, Excellent Post-Graduate.

Bachelor of Southeast University **2015.09 - 2019.06**

- National Third Prize and Provincial Special Prize in Computer Design Competition.

PUBLICATIONS

- **Qi Y**, Xu H, He Y, et al. Examinee-Examiner Network: Weakly Supervised Accurate Coronary Lumen Segmentation Using Centerline Constraint[J]. IEEE Transactions on Image Processing, 2021, 30: 9429–9441.
- Gharleghi R, ..., **Qi Y**, et al. Automated segmentation of normal and diseased coronary arteries – The ASOCA challenge[J]. Computerized Medical Imaging and Graphics, 2022.
- **Qi Y,** He Y, Qi X, et al. Dynamic Snake Convolution based on Topological Geometric Constraints for Tubular Structure Segmentation[J]. arXiv preprint arXiv:2307.08388, 2023. (ICCV 2023)
- Zhang Z, Zhang X, **Qi Y**, et al. Partial Vessels Annotation-based Coronary Artery Segmentation with Self-training and Prototype Learning[J]. arXiv preprint arXiv:2307.04472, 2023. (MICCAI 2023)

RESEARCH EXPERIENCE

Weakly Supervised Accurate Coronary Lumen Segmentation **2019.09 - 2021.11**

- Propose a new weakly supervised framework to deal with **class imbalance** and **limited annotations**.

Network Framework Design based on the Prior Knowledge **2021.12 - present**

- Incorporating the **prior knowledge** into the convolutional kernel.

Label Efficient Learning in Medical Image Processing **2022.04 - present**

- Propose a new training strategy with **few partial annotations**.

SKIILS

- Proficient in Python and C++.
- Familiar with Pytorch and Tensorflow.
- Proficient in reading English literature and writing English papers.