

# YICHENG(ELI) WU

Personal Website - Google Scholar

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## BRIEF INTRODUCTION

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I am now a master candidate of Northwestern Polytechnical University (NPU), China. My current researches mainly focus on medical image processing, especially fine object segmentation via deep learning. My research interests include general computer vision and medical data processing.

I have published three papers about retinal vessel segmentation. Two papers have been accepted by MICCAI 2018/2019. Meanwhile, I am the reviewer of some international conferences like MICCAI 2019. Moreover, I am responsible for one Post-graduate Foundation of NPU and participate in two China Postdoctoral Science Foundations. Also, I have applied three patents and two software copyrights.

## EDUCATION BACKGROUND

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**Northwestern Polytechnical University, China**

Master Candidate of Computer Science

School of Computer Science and Engineering

*September 2017 - Present*

Supervisor: Prof. Yong Xia

**University of Sydney, Australia**

Visiting student of Computer Science

School of Computer Science

*November 2018 - May 2019*

Supervisor: A/Prof. Weidong(Tom) Cai

*I was selected as a joint master student through a rigid academia evaluation process organized by the China Scholarship Council (CSC) in 2018.*

**Northwestern Polytechnical University, China**

Bachelor of Computer Science

School of Computer Science and Engineering

*September 2013 - July 2017*

*I achieved a high ranking among the 180+ undergraduates with the major of computer science and engineering in the comprehensive evaluation, and hence was recommended for Post-Graduate admission.*

## REPRESENTATIVE PUBLICATIONS

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- Yicheng Wu, Yong Xia\*, Yang Song, Yanning Zhang, and Weidong Cai, “NFN+: A Novel Network Followed Network for Retinal Vessel Segmentation” Submitted to a special issue of Neural Networks (*Under Review*)
- Yicheng Wu, Yong Xia\*, Yang Song, Donghao Zhang, Dongnan Liu, Chaoyi Zhang, and Weidong Cai, “Vessel-Net: Retinal Vessel Segmentation under Multi-path Supervision” In MICCAI 2019 (*Early Accept*)
- Yicheng Wu, Yong Xia\*, Yang Song, Yanning Zhang, and Weidong Cai, “Multiscale Network Followed Network Model for Retinal Vessel Segmentation” In Medical Image Computing and Computer-Assisted Intervention - MICCAI 2018, LNCS, vol. 11071, pp 119-126, 2018, Springer, Cham.
- Yicheng Wu, Yong Xia\*, and Yanning Zhang, “Deep Classification and Segmentation Model for Vessel Extraction in Retinal Images” In Pattern Recognition and Computer Vision - PRCV 2018, LNCS, vol. 11257, pp. 250-258, 2018. Springer, Cham.
- Donghao Zhang, Yang Song, Dongnan Liu, Chaoyi Zhang, Yicheng Wu, Heng Wang, Fan Zhang, Yong Xia, Lauren Odonnell and Weidong Cai. Efficient 3D Depthwise and Separable Convolutions with Dilation for Brain Tumor Segmentation. In the Australasian Joint Conference on Artificial Intelligence - AI 2019 (*Accept*)

## RECENT PROJECTS

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- **3D Vessel Segmentation and Centerline Extraction**

*As an intern at deepwise company, my work mainly focuses on how to preserve the spatial structure of 3D vessels and extract the vessel tree from the CT images accurately. Then, we have constructed an automatic centerline extraction system.*

- **Retinal Vessel Segmentation via Deep Learning**

*This project was sponsored by the Seed Foundation of Innovation and Creation for Graduate Students and was one of the only two master **key projects** associated with computer science of Northwestern Polytechnical University (81 key projects selected from 723 applications across the university).*

- **Computer Vision Training Camp**

*This project was organized by Kesci and CloudWalk. I was one of the **only two undergraduates** to join this training camp (50 members selected from 300+ students throughout the country). Moreover, I was one of the best team leaders.*

- **Optical Character Recognition based on Clinic Laboratory Sheets**

*I joined an innovation project for undergraduates to recognize the optical characters from the images of clinic laboratory sheets and then we applied for a patent about this project.*

## REPRESENTATIVE AWARDS

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- NPU Seed Foundation of Innovation and Creation for Graduate Students (**Top 11%**)
- Scholarship from China Scholarship Council (**Joint Master Student**)
- SJTU-USYD Research Conversazione Best Research Presentation
- NPU Postgraduate Academic Scholarship
- NPU Excellent Graduation Design Thesis Award (**Top 7%**)
- NPU Undergraduate First-Class Academic Scholarship

## RECENT ACADEMIC ACTIVITIES

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- Medical Imaging Computing Seminar (MICS 2019), China (**Poster**) *13-14 July 2019*
- PRCV 2018, China (**Poster**) *23-26 November 2018*
- MICCAI 2018, Spain (**Poster**) *16-20 September 2018*
- The 10th International Doctoral Forum, China (**Oral**) *02-03 December 2017*

## PERSONAL STATEMENTS

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- GPA: 82.93/100 (Undergraduate), 80.06/100 (Postgraduate)
- Programming skills: C Language (CCF Test: 230), Python and Matlab
- Programming platforms: Pytorch, Keras and Tensorflow
- Contact me:

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