Heng YU

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EDUCATION

Robotics Institute, School of Computer Science, Carnegie Mellon University *Aug.2021 – **present***

- MS in Robotics, Major GPA: 4.25/4.33

School of Information Science and Technology, Tsinghua University *Aug.2014 – Jul.2018*

- BE in Automation Department, Major GPA: 3.8/4.0 (top 10%), class ranking: 1/24

RESEARCH EXPERIENCES

Computational Behavior Lab, Robotics Institute, Carnegie Mellon University *Nov.2021 – **present***

- Research Assistant, Advisor: Prof. Laszlo Jeni

Institute of Medical Robotics, Shanghai Jiao Tong University *Sep.2021 – Feb.2022*

- Research Assistant, Advisor: Prof. Guangzhong Yang , Prof. Cheng Jin

Martinos Center for Biomedical Imaging, Harvard-MIT *Feb.2020 – May.2021*

- Research Assistant, Advisor: Prof. Kawin Setsompop, Prof. Berkin Bilgic

Li Lab, Department of Radiation Oncology, Stanford University *Nov.2018 – Jan.2020*

- Research Assistant, Advisor: Prof. Ruijiang Li

KLab, Robotics Institute, Carnegie Mellon University *Jul.2017 – Sep.2017*

- Summer Intern, Advisor: Prof. Kris Kitani

Intelligent Vision Group, Department of Automation, Tsinghua University *Sep.2016 – Feb.2018*

- Research Assistant, Advisor: Prof. Jie Zhou, Prof. Jianjiang Feng

WORK EXPERIENCES

Sangfor Technologies Inc., Shenzhen *May.2021 – Aug.2021*

- Machine Learning Engineer, Collaborator: Dr. Cheng Chi

Tsingh Technology Co., Ltd, Beijing *Jul.2018 – Apr 2021*

- Co-founder and Machine Learning Engineer, Collaborator: Dr. Baohua Chen, Dr. Lei Deng

Nebula Link Technology, Beijing, *Feb.2018 – Jun 2018*

- Intern, Collaborator: Dr. Yizhi Wang, Dr. Mengkai Shi

SELECTED PUBLICATIONS AND MANUSCRIPTS

- **H. Yu**, Z. Dong, Y. Arefeen, C. Liao, K. Setsompop, B. Bilgic. *eRAKI: Fast Robust Artificial neural networks for K-space Interpolation (RAKI) with Coil Combination and Joint Reconstruction.* **ISMRM** 2021 **Oral**
- Y. Arefeen, O. Beker, J. Cho, **H. Yu**, E. Adalsteinsson, B. Bilgic. *Scan-specific artifact reduction in k-space (SPARK) neural networks synergize with physics-based reconstruction to accelerate MRI*. **Magnetic Resonance in Medicine**
- C. Jin†, **H. Yu**†, J. Ke†, P. Ding†, Y. Yi, X. Jiang, X. Duan, J. Tang, D. Chang, X. Wu, F. Gao, R. Li. *Predicting Treatment Response from Longitudinal Images using Multi-task Deep Learning*. **Nature Communications**
- **H. Yu**, X. Feng, Z. Wang, H. Sun. *MixModule: Mixed CNN Kernel Module for Medical Image Segmentation*. **ISBI** 2020
- Y. Jiang†, C. Jin†, **H. Yu**†, J. Wu†, C. Chen, Q. Yuan, W. Huang, Y. Hu, Y. Xu, Z. Zhou, G. Fisher Jr, G. Li, R. Li. *Development and Validation of a Deep Learning CT Signature to Predict Survival and Chemotherapy Benefit in Gastric Cancer: A Multicenter, Retrospective Study*. **Annals of Surgery**
- C. Jin†, Y. Jiang†, **H. Yu**†, W. Wang, B. Li, C. Chen, Q. Yuan, Y. Hu, Y. Xu, Z. Zhou, G. Li, R. Li. *Deep Learning Analysis of the Primary Tumour and the Prediction of Lymph Node Metastases in Gastric Cancer.* **British Journal of Surgery**
- **H. Yu**, E. Ohn-Bar, D. Yoo, K. Kitani. *SmartPartNet: Part-Informed Person Detection for Body-Worn Smartphones.* **WACV** 2018
- C. Jin, J. Feng, L. Wang, **H. Yu**, J. Liu, J. Lu, J. Zhou. *Left Atrial Appendage Segmentation Using Cascaded Fully*

Convolutional Neural Networks and 3D Conditional Random Fields. **IEEE Journal of Biomedical and Health Informatics**

- C. Jin, **H. Yu**, J. Feng, L. Wang, J. Lu, J. Zhou. *Detection of Substances in the Left Atrial Appendage by Spatiotemporal Motion Analysis Based on 4D-CT*. **MICCAI** workshop 2017 **Oral**
- C. Jin, **H. Yu**, J. Feng, L. Wang, J. Lu, J. Zhou. *Left Atrial Appendage Neck Modeling for Closure Surgery*. **MICCAI** workshop 2017

AWARDS

Honorable Mention in Mathematical Contest in Modeling 2017

Academic Scholarship in Automation Department 2016, 2017 (30/150)

National Encouragement Scholarship 2015, 2016, 2017 (5/150)

The "HAGE" Scholarship in Automation Department 2015, 2016, 2017

Social Service Scholarship in Automation Department 2015 (8/150)

Outstanding Volunteers Award in Tsinghua University 2014

Tsinghua talented student program 2014 (1/13000)

SKILLS

Programming Languages: Python, Matlab, C/C++, and basic familiarity with R.

Operating System: Linux (Ubuntu, Fedora, CentOS), MacOS, Windows.

Frameworks and Tools: PyTorch Tensorflow, Keras, MXNet.

RELEVANT COURSEWORK

Signals and System Analysis (98/100), Process Control (98/100), Fundamentals of Engineering Graphics (98/100), C++ Programming Language (93/100), Complex Analysis (97/100), Data Structures (94/100), Interdisciplinary Research and Practice (95/100), Probability and Statistics (94/100), Computer Networks and Applications (93/100), Machine Learning* (A+/A+), Computer Vision* (A+/A+), Learning for 3D Vision* (A+/A+), Math Fundamentals for Robotics* (A/A).

** indicates graduate courses*