

Ruihai Wu

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EDUCATION BACKGROUND

Peking University

Bachelor of Science, Computer Science and Technology

Expected graduation, July 2020

- GPA: 3.59/4.0 (Academic Excellence Award)
- Related Courses:
Computer Vision and Deep Learning(top10), Data Structure and Algorithms(top20), Practice of Software Engineering(top1)

RESEARCH EXPERIENCE

Undergraduate member, Machine Intelligence (MI) Lab, Peking University

2018.3 - present

- **President's Undergraduate Research Fellowship**
- **Visual Relation Detection, Supervisor: Prof. Yadong Mu**
- To describe all interacting objects in an image using subject-predicate-object triplets (for example, person play guitar).
- Devised the first completely end-to-end neural network to do the task.
- Using graph-based optimization to extract proposals (in progress).
- Wrote code about the neural network with PyTorch, and code about data processing and evaluating benchmark.
- Part of the paper draft is in preparation.

Research Intern, Video Group in Megvii (Face++) Research

2018.7 - 2018.9

- **Human Attribute Recognition, Mentor: Dr. Chi Zhang, Lead Researcher of Video Group**
- To recognize human attributes (hat, bicycle, glasses, etc.) in videos.
- Devised a model to synchronously recognize twelve human attributes.
- Compressed the model size by 90%, using knowledge distillation.
- Used attention method, multi-layer features and segmentation results to extract human features more profoundly.

Research Intern, Microsoft Research Lab - Asia (MSRA)

2019.3.21 -

- **Research projects about Machine Learning**

OPEN SOURCE PROJECTS

TensorLayer 2.0 (under development)

- <https://github.com/zsdonghao/tensorlayer2> (TensorLayer 1.0: <https://github.com/tensorlayer/tensorlayer>, 4754 Stars)
- TensorFlow-based deep learning library
- One of the four collaborators

HONORS AND AWARDS

- May Fourth (decoration day) Scholarship (15 / 330), *Peking University* 2018
- Academic Excellence Award, *Peking University* 2018
- Excellent Coach Award in Olympiad in Informatics Camp, *Olympic Committee of Jiangsu Province* 2016, 2017, 2018
- Huaying Elite Scholarship, *Huaying Education Foundation, Changzhou City* 2016
- Bronze medal in National Olympiad in Informatics (NOI), *China Computer Federation* 2015
- Admitted as a member in Jiangsu Province Team (one of the top-ranking teams in China with only 15 members) in National Olympiad in Informatics (NOI), *Olympic Committee of Jiangsu Province* 2015
- Bronze medal in Asia-Pacific Informatics Olympiad (APIO), *China Computer Federation* 2015
- Bronze medal in National Winter Camp (WC), *China Computer Federation* 2015
- First prize (three times) in National Olympiad in Informatics in Provinces (NOIP) (top 0.1%), *China Computer Federation* 2013, 2014, 2015

PROFESSIONAL SKILLS

- Programming Languages: Python(skilled), C/C++(skilled), Java(skilled), MATLAB
- Deep Learning Framework: PyTorch, Tensorflow
- Language: GRE 155(Verbal Reasoning) + 170(Quantitative Reasoning)

OTHER EXPERIENCES

- Participated in the writing of two Olympiad course books in Jiangsu Province: *Advanced Data Structure* (the only special acknowledgement) and *Mathematics in Olympiad in Informatics* (acknowledgement).
- Served as the coach (invited by the Olympic Committee of Jiangsu Province, and taught the best class) in the official winter/summer camp of Olympiad in Informatics in July, 2016, January, 2017 and February, 2018.