

# WENHAO WU

**HomePage:** <https://whwu95.github.io>, **E-mail:** wuwenhao17@mails.ucas.edu.cn

**Address:** 1068 Xueyuan Avenue, Shenzhen University Town, Shenzhen, P.R.China

## EDUCATION

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**University of Chinese Academy of Sciences**, China

*September 2017 - June 2020*

M.Eng. in Pattern Recognition and Intelligent System.

GPA: 3.70/4.0

Training Unit: **Multimedia Lab, Shenzhen Institutes of Advanced Technology, CAS.**

Advisor: **Prof. Shifeng Chen** and **Prof. Yu Qiao**.

**Central South University**, China

*September 2013 - June 2017*

B.Eng. in Automation.

Overall GPA: 87.31/100

Recommended to Chinese Academy of Sciences

## RESEARCH INTERESTS

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**Computer Vision:** Action Recognition, Action Localization.

## RESEARCH EXPERIENCE

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**Baidu Research**

*September 2018 - Present*

*Institute of Deep Learning (IDL), Mentors: **Xiao Tan**, **Dongliang He***

*Research Intern*

- Propose an effective model on untrimmed video recognition task, which is based on a video frame sampling technique by multi-agent reinforcement learning. (**Oral Presentation in ICCV'2019**)
- Research on Dynamic Inference for Video Recognition.
- Awarded the Most Outstanding Intern.

**iQIYI**

*June 2018 - September 2018*

*Video Analysis Group, Mentor: **Yang Yang***

*Research Intern*

- Research on 3D Convolutional Neural Network for Video Classification.
- To address the problem of I/O bottleneck when large scale video data is stored as encoded image format, i.e. JPEG, we develop a fast data loading method for decoding video on the fly in a data processing pipeline.

**Samsung Research China**

*March 2018 - June 2018*

*Machine Learning Lab, Mentor: **Zhenbo Luo***

*Research Intern*

- Considering the cases when provided with limited computing resources, we integrate long-term and long-term temporal information base on 2D CNN on a large scale activity recognition dataset.
- As the major contributor to participate in the CVPR'18 ActivityNet Kinetics-600 challenge (Rank 8) and proposed a multi-stream network based on 2D CNN for video classification.

**Shenzhen Institutes of Advanced Technology, CAS**

*September 2016 - August 2017*

*Multimedia Lab, Advisor: **Prof. Shifeng Chen** and **Prof. Yu Qiao***

*Visiting Student*

- As the major contributor to design a face recognition box and made it to a real-life portable device. At last, we won the prize of China Hi-Tech Fair 2018 Top 10 Popular Products as well as honored to be interviewed by CCTV.

**Central South University**

*August 2015 - March 2016*

*UAV Institute, Advisor: **Prof. Chunhua Peng***

*Research Assistant*

- Programmed for the flight control of UAV with PID Algorithm

- We designed a long-endurance unmanned aerial vehicle as well as honored to be interviewed by CCTV.

## Central South University

Smart Car Laboratory, Advisor: Prof. Ji Wang

March 2014 - July 2015

Research Assistant

- Lead the team to participate in the China Freescale Cup Intelligent Car Competition (2<sup>nd</sup> Prize).
- Completed a National College Students Innovation and Entrepreneurship Project as the project leader.

## PUBLICATIONS

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- **Wenhao Wu**, Dongliang He, Xiao Tan, Shifeng Chen and Shilei Wen, **Multi-Agent Reinforcement Learning Based Frame Sampling for Effective Untrimmed Video Recognition**, In *International Conference on Computer Vision (ICCV)*, 2019 (**Oral Presentation.**)
- **Wenhao Wu**, Wenbo Chen, Zhenbo Luo. Samsung & SIAT Submission to ActivityNet Challenge 2018, **ActivityNet Large Scale Activity Recognition Challenge**, In *International Conference on Computer Vision and Pattern Recognition (CVPR) Workshop*, 2018

## CONTESTS

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- “Tianchi” ECG artificial intelligence competition. Rank 8 (2353 in total). 2019
- The ActivityNet Challenge 2018 on CVPR’18: Trimmed Action Recognition (Kinetics). Rank 8. 2018
- First Prize of America Mathematical Contest In Modeling (Top 7%) 2016
- The 1<sup>st</sup> Prize in National Undergraduate Mechanical Innovation Design Competition 2016
- The 2<sup>nd</sup> Prize in China Freescale Cup Intelligent Car Competition (South China Region) 2015
- The 2<sup>nd</sup> Prize in Smart Car Racing Competition of Hunan Province 2015
- The 3<sup>rd</sup> Prize in Contemporary Undergraduate Mathematical Contest in Modeling (Hunan) 2015
- The 1<sup>st</sup> Prize in Smart Car Racing Competition of Central South University 2015

## SELECTED HONORS AND AWARDS

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- Best Intern Honor in Baidu (only 2 recipient in the Department) 2019
- Scholarship for Academic Excellence of Shenzhen Institutes of Advanced Technology 2018
- Excellent Undergraduate Student of Central South University (Top 10%) 2017
- Outstanding Student of Central South University 2016
- National Endeavor Scholarship (Top 5%) 2016
- Excellent National College Students Innovation and Entrepreneurship Project 2016
- Excellent Student Cadre of Central South University 2015
- Excellent League Member of Central South University 2015
- Scholarship for Academic Excellence of Central South University 2014,2015,2016

## ACADEMIC SERVICES

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Conference Reviewer: ICCV-2019

## CODE SKILLS

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Python, Linux, Matlab, C/C++ and deep learning frameworks such as PyTorch, TensorFlow, Caffe.