

# Kai Yi (William)

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INFORMATION      Homepage: [kaiyi.me](http://kaiyi.me) | Phone: +86 13772103675 / +65 93769035

EDUCATION        **Xi'an Jiaotong University (XJTU)** Aug 2015 - Jun 2019  
B.Eng., Software Engineering  
- Department of Software Engineering, GPA: 85.49/100  
- Thesis: Accurate Object Detection and Weakly-Supervised Perception in Complex Scenes  
Rated as A+ (Top 1%), supervised by Prof. [Nanning Zheng](#)

PUBLICATIONS    [1] [Cognition-based Deep Learning: Progresses and Perspectives](#)  
**Kai Yi**, Shitao Chen, Yu Chen, Chao Xia, Nanning Zheng  
*Artificial Intelligence Applications and Innovations (AIAI)*, 2018 (Oral)  
[2] [Feature Selective Small Object Detection via Knowledge-based Recurrent Attentive Network](#)  
**Kai Yi**, Zhiqiang Jian, Shitao Chen, Yuedong Yang, Nanning Zheng  
*IEEE International Conference on Intelligent Transportation Systems (ITSC)*, 2019  
[3] [Affine LBG for Codebook Training of Univariate Linear Representation](#)  
Tiannan Dong, Jianji Wang, Meng Yang, **Kai Yi**, Nanning Zheng  
*IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, 2018

PROJECTS        [1] [Hierarchical Conceptual Rotation of Mental Knowledge Representation](#)  
**Kai Yi**, Feng Yu, Liang Zhao, Tingting Han  
*Project: Final-term Paper of Social Psychology*, 2018  
[2] [Graph Theory Applied to Biological Network Alignment](#)  
**Kai Yi**, Wayne Hayes  
*Project: Open Project hosted by Prof. Wayne Hayes, Researchgate Available*, 2018  
[3] [Neural Network Compression and Acceleration: An Overview](#)  
**Kai Yi**, Xinyu Jiang, Yanlan Lou, Yile Qiu, Shuanghe Yu, Jianye Pang  
*Project: Personalized Speech Synthesis for Health Care*, 2017  
[4] [Associative Memory Model and High-Level High-Order Hopfield Neural Network](#)  
**Kai Yi**, Nanning Zheng  
*Project: Associative Memory Model, research paper in preparation*  
[5] [Personalized Speech Synthesis System for Alleviating Loneliness of Old People \(CN\)](#)  
**Kai Yi**, Xinyu Jiang, Shuanghe Yu, Jianye Pang  
*Project: National Undergraduates Innovation Project, rated as 'Excellent'*, 2018

RESEARCH        **National University of Singapore** Apr 2019 - Sep 2019  
EXPERIENCE       *Research Intern* Singapore

- Develop novel method for single RGB image based 3D pose estimation:  
region-adaptive affinity field, weakly supervised learning, structure prior learning, et al.
- Advisor: Prof. [Angela Yao](#)

**Sensetime Group Limited** Mar 2019 - Jun 2019  
*Research Intern* Beijing, China

- Develop accurate & fast object detection methods based on [mmdetection](#), and converted pytorch model into caffe model with supported layers, then translated these algorithms to commercial embedded chips.
- Supervisor: [Wentao Liu](#), Senior Research Fellow of Sensetime

**Institute of Artificial Intelligence and Robotics**  
*Research & Engineering Intern*

July 2017 - Feb 2019  
Xi'an, Shaanxi

- Study on artificial intelligence system based on brain cognition, and a small object detection method named KB-RANN was designed.
- Proposed a new codebook training method named as A-LBG, accepted by GlobalSIP18.
- Accelerate several typical object detection methods by using TensorRT on TX2/PX2 mobile device and applied them in autonomous driving car.
- Supervisor: Prof. [Nanning Zheng](#)

**Institute of Social Psychology of XJTU**  
*Research Assistant*

Mar 2018 - Nov 2018  
Xi'an, Shaanxi

- "Detecting Adolescent Periodic Stress via Micro-blog":  
Studied the continuous periodic analysis methods, and proposed a novel adolescent periodic stress cycle detection method based on probabilistic graph model & WARP algorithm.
- Supervisor: Prof. Liang Zhao and [Feng Yu](#)

**Ministry of Education Key Lab for Intelligent Networks**  
*Research & Engineering Intern*

Sep 2016 - Apr 2017  
Xi'an, Shaanxi

- Develop new training models to handle object tracking by using reinforcement learning.
- Supervisor: Prof. [Pinghui Wang](#) and Jing Tao

**TEACHING &  
SERVICES**

**Reviewer:** ITSC19, ITSC18, IV18, TNNLS  
**Student Member:** IEEE, ACM

**Teaching Assistant:** Introduction to Machine Learning, Computer Architecture

**AWARDS &  
HONORS**

- Zeng Xianzi Scholarship (37/4100, top 0.9%)	2016-2018
- Candidate of 6th Excellent Student Model of XJTU (6/37)	2018
- Outstanding Leader of the Students' Union (top 2%)	2016
- Social Activities Award (top 1%) of XJTU	2016
- National Encouragement Scholarship (top 1%)	2016-2018
- Excellent Student Award (top 5%) of XJTU	2016-2018
- Best Debater in Freshman Debating Contest of XJTU	2015

**ACTIVITIES**

Leader of Technology Department, AI Club of XJTU	Dec 2017 - Nov 2018
Volunteer Tutor of Academic Counseling Center of XJTU	Aug 2016 - July 2018
Leader of App Group, Technical Club Activities' Center of XJTU	Jun 2016 - May 2017
Member of News Club of XJTU	Apr 2016 - Dec 2016
Leader of Department of Arts and Literature, Students' Union of XJTU	Sep 2015 - Feb 2017

**ADDITIONAL  
INFORMATION**

Proficient in Python, TensorFlow, C++/C and Android, Master Pytorch and Caffe  
Fond of long-distance running and reading classical German philosophy works