Jianfei**Yang**

Science is the only way to magic.

recent photo

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languages
Chinese mother tongue
English fluency

research
Mobile Computing
Computer vision
Machine learning

programming
♥ Python
Javascript, C++,
Matlab, Latex
CSS3 & HTML5
Verilog, Scala, Lua
R programming

education

2016–present	**Doctor of Philosophy**	Nanyang Technological University

School of Electrical and Electronic Engineering
Research Interests: **Mobile Computing** *(indoor localization and smart home)*, **Computer Vision** *(object tracking and recognition)*, **Machine Learning** *(deep neural networks)*

2018–1-3	**Visiting Scholar**	University of California, Berkeley

Department of Electrical Engineering and Computer Sciences

2012–2016	**Bachelor** of Software Engineering	Sun Yat-sen University

School of Data and Computer Science *(Major GPA: 3.7/4.0, top 10%)*
Graduate with **certificate of honor** in light of excellent scientific contribution.

experience

2014-2015	**Teaching Assistant**	Sun Yat-sen University

Server for the C++ Programming/Cloud Computing Course.

2013-2014	**Internship: Vision Engineer in DJI**	DJI Intern

Dedicated to visual tracking problem applied in UAV as a vision engineer.

2013–2014	**Founder of Microsoft Technology Club in Zhuhai**	Operation

Undertake seminars and competitions for Microsoft.

2012–2013	**Chairman of Student Union**	Leadership

Offer welfare and organize various activities.

projects

2018	**Machine Learning: Smart Sensing**	NTU

We design a representation and transfer learning framework for human activity recognition using sensor data in smart homes. The deep model employs CNN and LSTM to extract the features and can generalize well for multiple domains.

2017	**Smart Building: Indoor localization**	NTU

We utilize commercial routers to track mobile devices equipped with WiFi modules passively based on calibration data and machine learning. Our system has been deployed in Germany, USA and Singapore.

2016	**NLP / CV: Intelligent Image Retrieval System**	Microsoft BOP

The users can use keywords to find the photo they want. We build the system by means of image recognition (extracting tags), voice recognition and natural language processing (semantic understanding).

2015	**Robotics: Nao Presentation Tool**	Robot Nao Development

It is specially designed for The Canton Fair. I programmed robot Nao to control the PC and make presentations. which was implemented by socket, Nao-api and markup language.

2014	**Smart Car: Visual Navigation System**	DJI Intern

Build a navigation system for a smart car based on computer vision, which combines SLAM, visual tracking and recognition.

Publications: Journals

2017   **Non-intrusive Occupancy Sensing in Commercial Buildings**
Han Zou, Hao Jiang, *Jianfei Yang*, Lihua Xie, Costas Spanos
Energy and Buildings 2017 (IF=4.067)

2017   **Compressive Perceptual Hashing Tracking with Online Foreground Learning**
Long Chen, Zheng Li, *Jianfei Yang*
Neurocomputing 2017 (IF=3.17)

Publications: Conference

2018   **Fine-grained Adaptive Location-independent Activity Recognition using Commodity WiFi**   WCNC
Jianfei Yang, Han Zou, Hao Jiang, Lihua Xie
WCNC 2018

2016   **Online Visual Tracking via Correlation Filter with Convolutional Networks**   VCIP
Jianfei Yang, Zheng Li, Chang-Dong Wang, Weishi Zheng
IEEE International Conference on Visual Communications and Image Processing 2016

2015   **Compressive Perceptual Hashing Tracking with Online Foreground Learning**   ROBIO
Jianfei Yang, Zheng Li, Long Chen, Juanzha
IEEE International Conference on Robotics and Biomimetics 2015

2015   **Robust Vehicle Tracking Using Perceptual Hashing Algorithm**   ICMLA
Jianfei Yang, Zheng Li, Long Chen
IEEE International Conference of Machine Learning and Application 2015 .

2015   **Traffic Detection System Based on Unmanned Aerial Vehicle Integrated Analysis(UAVIA) in E-Business Logistics**   ICEBE
Jianfei Yang, Zhaoyang Zeng, Zhou Fang
IEEE International Conference on e-Business Engineering 2015

2018   **WiFi-based Human Identification via Convex Tensor Shapelet Learning**   AAAI
Han Zou, Yuxun Zhou, *Jianfei Yang*, Lihua Xie, Costas Spanos
AAAI 2018

2017   **WiFi-based Device-Free Human Activity Recognition via Automatic Representation Learning**   MOBICOM Poster
Han Zou, Yuxun Zhou, *Jianfei Yang*, Weixi Gu, Lihua Xie, Costas Spanos
MOBICOM 2017

2017   **Multiple Kernel Representation Learning for WiFi-based Human Activity Recognition**
ICMLA 2017
Han Zou, Yuxun Zhou, *Jianfei Yang*, Weixi Gu, Lihua Xie, Costas Spanos
ICMLA 2017

2017   **FreeCount: Device-Free Crowd Counting with Commodity WiFi**   GLOBECOM
Han Zou, Yuxun Zhou, *Jianfei Yang*, Weixi Gu, Lihua Xie, Costas Spanos
GLOBECOM 2017

2017   **FreeDetector: Device-Free Occupancy Detection with Commodity WiFi**   SECON
Workshop
Han Zou, Yuxun Zhou, *Jianfei Yang*, Weixi Gu
Workshop on Smart and Connected Indoor Environments, SECON 2017

2016   **Item Sorting Platform Based on Cloud Computing**   ICEBE
Minbiao Han, *Jianfei Yang*, Zhou Fang, Zhiyuan Fang
IEEE International Conference on e-Business Engineering 2016

awards

Dec. 2017	**2017 Global Data Challenge, Champion (1/771)**	JD Finance
May. 2017	**Microsoft Imagine Cup in China, First Prize (2/782)**	Microsoft
March. 2017	**Buildathon of MOE of Singapore, Champion (1/120)**	Ministry of Education of SG
Dec. 2016	**China Mobile Internet of Things Hackathons, Champion**	China Mobile
May. 2016	**Microsoft Beauty of Programming Challenge, Champion**	Microsoft Research Asia, IEEE
Nov. 2015	**National Mobile Internet Innovation Contest, First Prize**	Ministry of Industry
Sep. 2015	**National Undergraduate IOT Design Contest, First Prize**	Ministry of Education of China
Aug. 2015	**HackNTU, Intel and Migo Prize**	National Taiwan University
Jun. 2015	**Unique Hack Day, Rank 2nd**	Huazhong University of Science and Technology
Apr. 2015	**American Mathematical Contest In Modeling, Meritorious Winner**	International
Mar. 2015	**Robot Hackathon in China, First Prize**	ALDEBARAN
Sep. 2014	**Ke-teng Cup Application Competition, First Prize**	SYSU
Sep. 2013	**Undergraduate First-class Scholarship and Giordano Scholarship**	SYSU
Dec. 2012	**Global Management Challenge 2nd Prize in China**	GMC Committee

interests

professional:

- Computer vision (Object recognition and tracking, image processing)
- Android / IOS app development (Specific design for customer)
- PC Software design (Qt for C/C++ and Python)
- Data mining (Participate in a intelligent transportation planning project)
- Cloud computing (Familiar with Windows Azure, SAE, GAE, etc)
- Unmanned aerial vehicle (Control and visual system)

personal:

- Saxophone (Toppest grade certified by the China Conservatory of Music)
- Guitar, Ukulele (Playing and singing)
- Climbing and photography (Outward Bound Trainer certified by the Ministry of human resources and social security in China)