NTU Presidential Postdoctoral Fellowship

NTU校长博士后奖学金 2020

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Reg. No. 200604393R

29 July 2020

Dr Yang Jianfei
50 Nanyang Avenue
#04-14
Nanyang Technological University
Singapore 639798

Dear Dr Yang,

LETTER OF AWARD
GOPALAKRISHNAN – NTU PRESIDENTIAL POSTDOCTORAL FELLOWSHIP 2020

Congratulations! I am delighted to inform that your application for the 2020 Gopalakrishnan – NTU Presidential Postdoctoral Fellowship (PPF) has been successful.

The appointment as a Presidential Postdoctoral Fellow is for two (2) years. You are to take up the position no later than **31 December 2020**. There will be mentorship and support in an established research group, and the opportunity to guide graduate students.

The Gopalakrishnan – NTU PPF appointment is on the condition that you satisfy and complete all pre-employment formalities in Singapore.

The full award terms and appointment conditions of the Fellowship will be forwarded in a separate letter from NTU HR.

The Talent Recruitment and Career Support (TRACS) office will guide you through the administrative processes which are to be completed to take up this award.

I look forward to your acceptance of this prestigious Fellowship.

Thank you.

Yours sincerely,

Professor Lam Khin Yong
Senior Vice President (Research)

Patent Development

国际专利①：面向个人位置服务的基于WiFi的无监督设备身份联结算法

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
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WIPO | PCT

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G01S 5/00 (2006.01) *H04W 4/021* (2018.01)
G01S 5/02 (2010.01) *H04W 4/029* (2018.01)
H04W 4/00 (2018.01) *H04W4/33* (2018.01)
H04W 4/02 (2018.01) *H04W 84/12* (2009.01)

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(26) Publication Language: English

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62/675,485 23 May 2018 (23.05.2018) US

(71) Applicants: **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200 (US). **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).

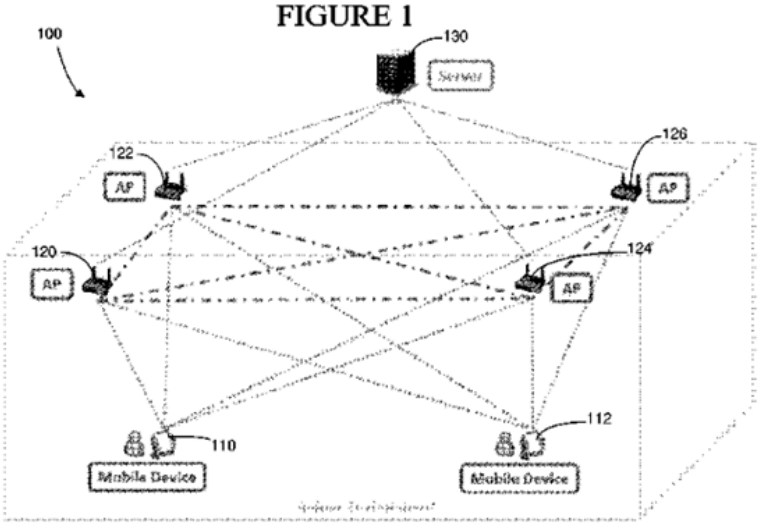
(72) Inventors: **ZOU, Han;** 2450 Milvia Street, Apt. 16, Berkeley, CA 94704 (US). **SPANOS, Costas;** 3292 Springhill Road, Lafayette, CA 94549 (US). **ZHOU, Yuxun;** 25 W. Randolph Street, Apt. 181 1, Chicago, IL 60601 (US). **YANG, Jianfei;** 14-17 Graduate Hall 2, 48 Nanyang Crescent, Singapore 637121 (SG).

(74) Agent: **WAGNER, Justin, D.** et al.; Miller Nash Graham & Dunn LLP, 111 SW Fifth Avenue, Suite 3400, Portland, OR 97204 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(54) **Title:** UNSUPERVISED WIFI-ENABLED DEVICE-USER ASSOCIATION FOR PERSONALIZED LOCATION-BASED SERVICE

FIGURE 1



(57) **Abstract:** A mobile device and user association system can include wireless routers to execute software for capturing data including received signal strength (RSS) values and media access controller (MAC) addresses for a number of mobile devices (MDs) from existing wireless fidelity (WiFi) traffic. The system can also include a server to receive the RSS values and MAC addresses of the MDs to estimate a location of each MD and generate historical location data of each MD, identify and filter out temporary MDs, classify each non-temporary MDs as either a static device (SD) or a mobile phone (MP), and associate a user with each SD and MP.

WO 2019/226910 A1

Patent Development

国际专利②：无源身份识别与手势识别

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
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WIPO | PCT

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H04B 7/04 (2017.01)

(21) International Application Number:
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62/719,901 20 August 2018 (20.08.2018) US

(71) Applicants: **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200 (US). **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).

(72) Inventors: **ZOU, Han**; 2450 Milvia Street, Apt. 16, Berkeley, CA 94704 (US). **SPANOS, Costas**; 3292 Springhill Road, Layfayette, CA 94549 (US). **ZHOU, Yuxun**; 25 W. Randolph Street, Apt. 1811, Chicago, IL 60601 (US). **YANG, Jianfei**; Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **XIE, Lihua**; Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).

(74) Agent: **WAGNER, Justin, D.** et al.; Miller Nash Graham & Dunn LLP, 3400 U.S. Bancorp Tower, 111 SW Fifth Avenue, Portland, OR 97204 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

(54) Title: DEVICE-FREE-HUMAN IDENTIFICATION AND DEVICE-FREE GESTURE RECOGNITION

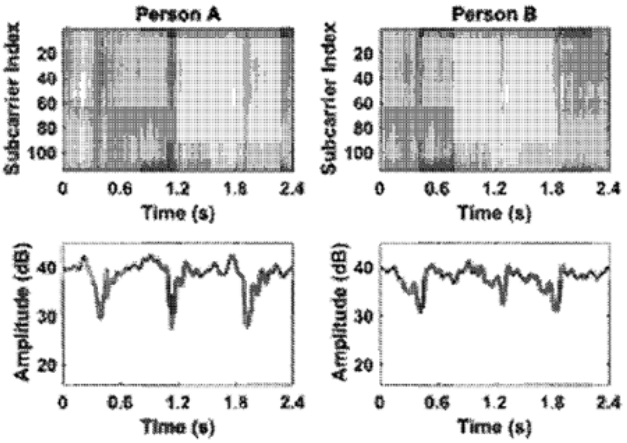


FIGURE 1

(57) Abstract: A system can include multiple WiFi-enabled commercial off the shelf (COTS) Internet of Things (IoT) devices disposed within an environment and configured to be a transmitter (TX) or a received (RX) to send or receive data over a WiFi radio frequency communication link. A server can be configured to receive and parse the CSI data transmitted from the RX, store the CSI data with a corresponding human identity label collected for training, train a human identification classifier using a Convex Clustered Concurrent Shapelet Learning (C^3SL) method, and estimate an identification of a user based on the CSI data and the C^3SL method. The server can be configured to receive and parse the CSI data transmitted from the RX, transfer the CSI data into real-time CSI frames, store the real-time CSI frames in a database, store the real-time CSI frames with a corresponding gesture

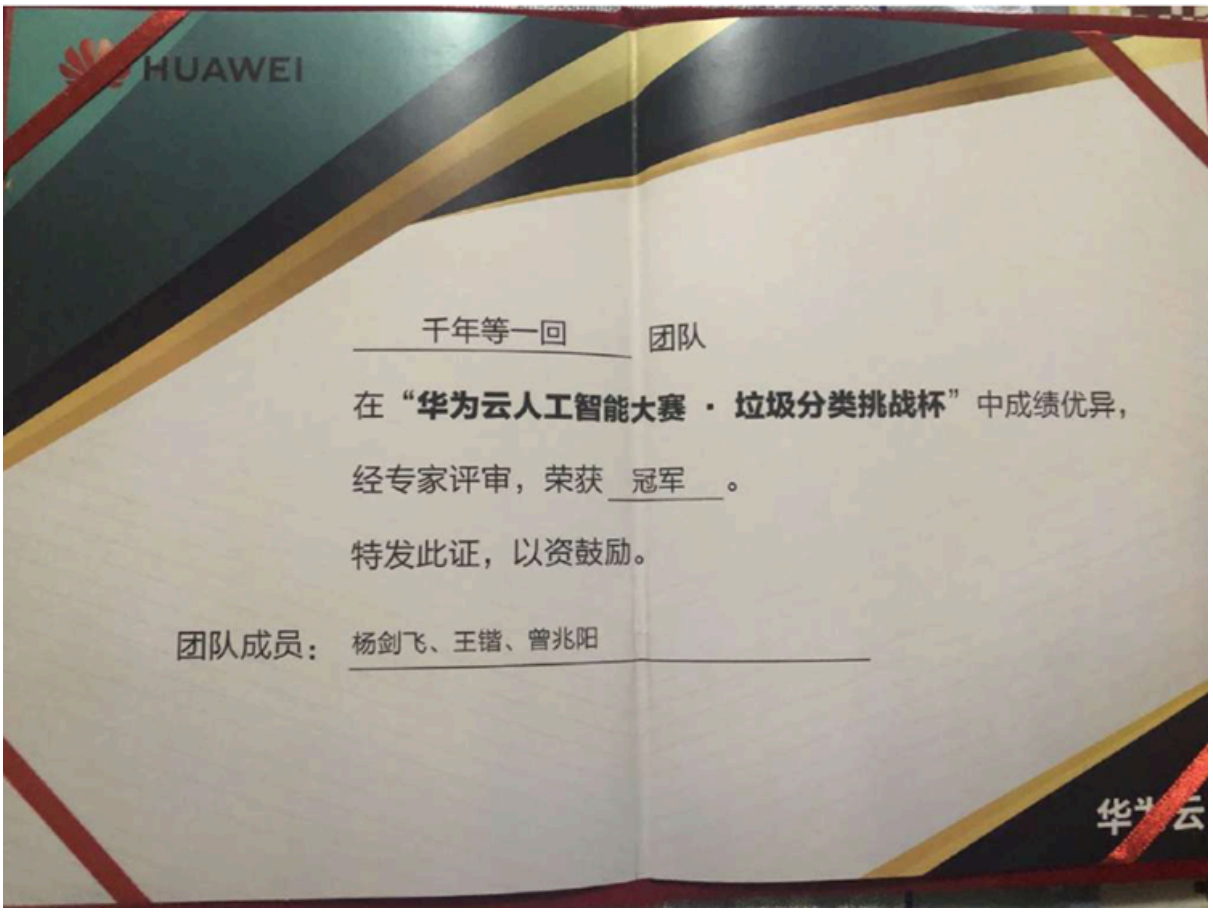
WO 2020/037313 A1

[Continued on next page]

太平洋地震工程研究中心-交叉学科图像识别大赛 冠军

DIGIX 2020 - Global Top AI Algorithm Contest, First Class

Huawei Cloud Challenger Contest - Waste Sorting Using AI, Champion



ACM 世界多模态大会 人体表情注意力识别大赛-冠军

IEEE CVPR-19 计算机视觉与模式识别大会
UG2+ 雨中无样本目标检测大赛-冠军

CVPR 2019 UG2+ Challenge

Winner Certificate

awarded to

Jianning Chi, Yixiu Liu, Kai Wang, Xingyu Gao, Zhenyu Chen, Huicai Zhong, Yongzhou Li, Jing Huang, Heng Guo, Jianfei Yang, Wenjuan Liao

in recognition of their solution submission to

Sub-Challenge 2.3: Zero-Shot Object Detection with Raindrop Occlusions

Signed ZHANGYANG WANG Date June 16, 2019

Zhangyang Wang (on behalf of the workshop organization committee)

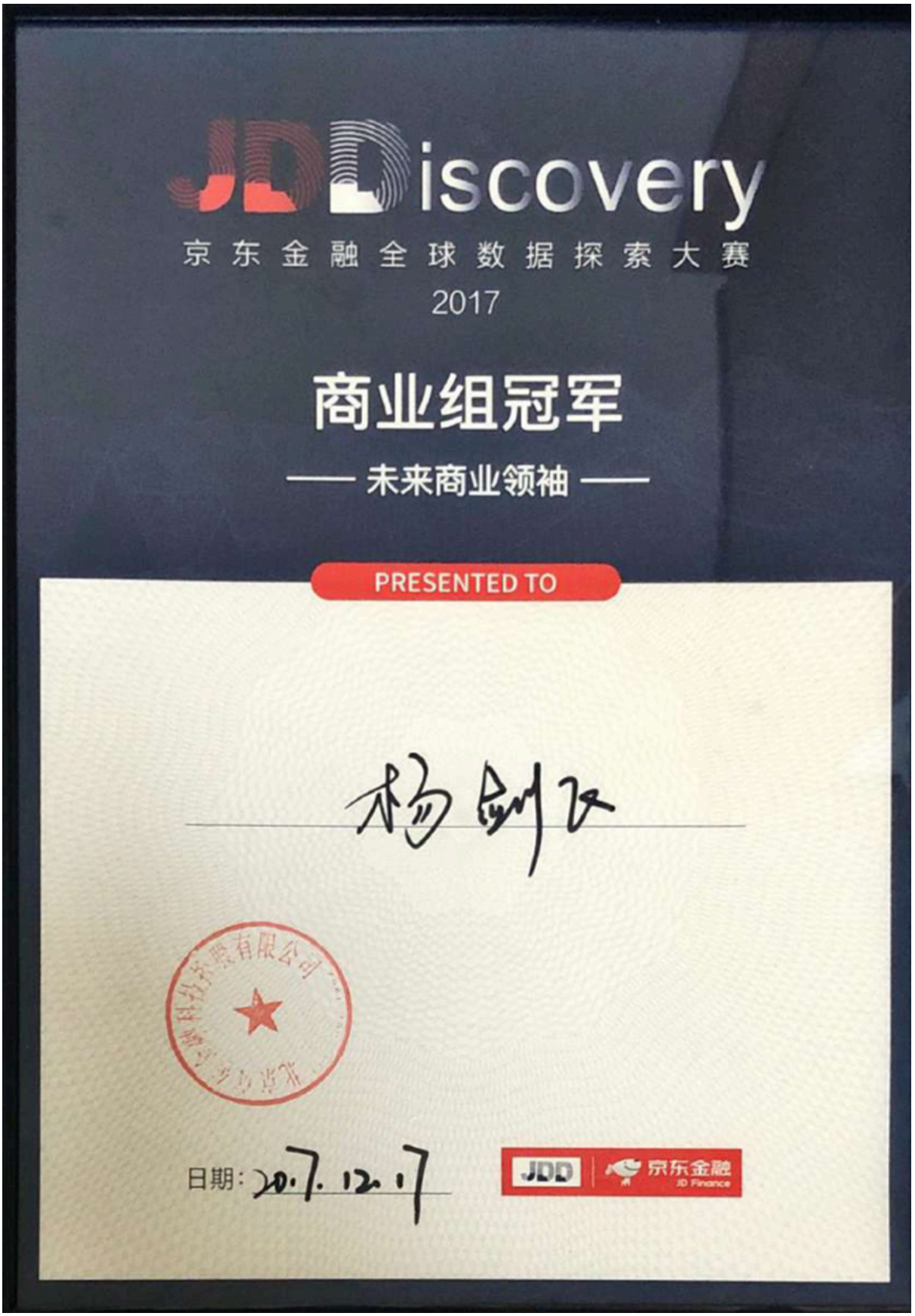
2017 Microsoft Imagine Cup - Global STEM Contest, Final in China, First Class

2016 Microsoft Beauty of Programming, National Champion

IEEE/微软亚洲研究院 编程之美挑战赛-全国总冠军 (1/20000)

2016 China Mobile Connectivity of Everything Hackathon, First Class

2017 JD Finance JDiscovery Contest - Rising Business Stars, Champion



2019 Fifth China National Contest of College Students - "Internet +", Bronze Medal

获奖证书

程瑞、刘俊男、陈桂选、徐一飞、孙闯、葛浩然、杨剑飞、王锴、陈健福、雷言、全静、冯春梅、刘翼豪、卢珉、刘静、徐光磊、何晨、陈雨：

你们的作品《农业病虫害智能收集检测解决一体化服务平台》，在第五届中国“互联网+”大学生创新创业大赛中荣获 铜奖

指导教师：时中荣、王庭、符茂胜、李祖松、裴明敬、涂劲松、马云

特发此证，以资鼓励。

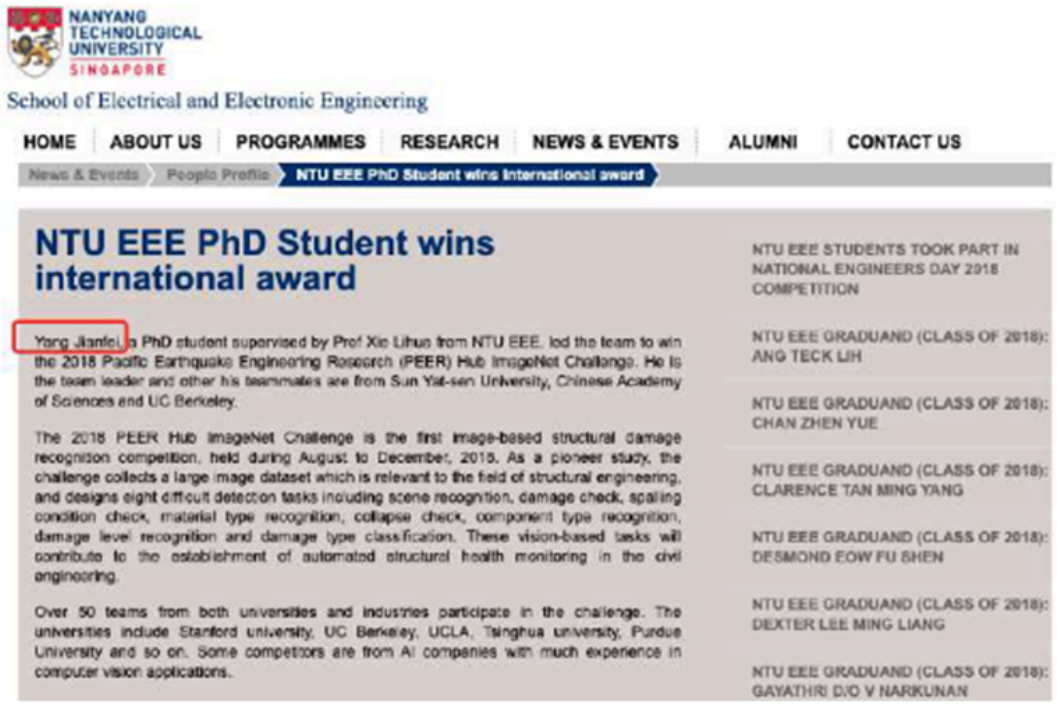
主办单位：
教育部、中央统战部、中央网络安全和信息化委员会办公室、
国家发展和改革委员会、工业和信息化部、人力资源和社会保障部、
农业农村部、国家知识产权局、中国科学院、中国工程院、
国务院扶贫开发领导小组办公室、共青团中央、浙江省人民政府

中国“互联网+”大学生创新创业大赛组织委员会
二〇一九年十月

证书编号：201910368

Feature Report by NTU

http://www.eee.ntu.edu.sg/NewsnEvents/PeopleProfile/Pages/NTU-EEE-Research-Student-win-the-PEER-Hub-ImageNet-Challenge-2018.aspx



NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Electrical and Electronic Engineering

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News & Events > People Profile > NTU EEE PhD Student wins international award

NTU EEE PhD Student wins international award

Yang Jianfei, a PhD student supervised by Prof Xie Lihua from NTU EEE, led the team to win the 2018 Pacific Earthquake Engineering Research (PEER) Hub ImageNet Challenge. He is the team leader and other his teammates are from Sun Yat-sen University, Chinese Academy of Sciences and UC Berkeley.

The 2018 PEER Hub ImageNet Challenge is the first image-based structural damage recognition competition, held during August to December, 2018. As a pioneer study, the challenge collects a large image dataset which is relevant to the field of structural engineering, and designs eight difficult detection tasks including scene recognition, damage check, spalling condition check, material type recognition, collapse check, component type recognition, damage level recognition and damage type classification. These vision-based tasks will contribute to the establishment of automated structural health monitoring in the civil engineering.

Over 50 teams from both universities and industries participate in the challenge. The universities include Stanford University, UC Berkeley, UCLA, Tsinghua University, Purdue University and so on. Some competitors are from AI companies with much experience in computer vision applications.

NTU EEE STUDENTS TOOK PART IN NATIONAL ENGINEERS DAY 2018 COMPETITION

NTU EEE GRADUAND (CLASS OF 2018): ANG TECK LIH

NTU EEE GRADUAND (CLASS OF 2018): CHAN ZHEN YUE

NTU EEE GRADUAND (CLASS OF 2018): CLARENCE TAN MING YANG

NTU EEE GRADUAND (CLASS OF 2018): DESMOND EOW FU SHEN

NTU EEE GRADUAND (CLASS OF 2018): DEXTER LEE MING LIANG

NTU EEE GRADUAND (CLASS OF 2018): GAYATHRI D/O V NARKUNAN

Feature by Microsoft Research Asia - The Hackathon Saga of Jianfei Yang

https://www.msra.cn/zh-cn/news/outreach-articles/hackathon-20160831

Microsoft | 微软亚洲研究院

干货 | 海内外最IN Hackathon大盘点,技术大神带你玩转黑客松! --杨剑飞的黑客松之旅

2016-08-31 | 作者：微软亚洲研究院

News Report - Face image recognition to help farmers manage livestock farming

https://baijiahao.baidu.com/s?id=1587192629316939229

机器之心从冠军团队选手的背景资料发现，三位队员履历很不简单，队长麻昊博目前就读于香港大学，是一名商学院研究生。在此之前，曾任格兰莫尔寝具有限公司 COO，还创办了自己的咨询工作室。

技术担当杨剑飞目前是新加坡南洋理工大学博士二年级学生。早在 2013 年，杨就创办了微软俱乐部珠海分会；2014 年，杨供职于 DJI，担任视觉工程师；并于 2017 年 8 月于新加坡创办室内智能感知企业 SensinTech，目前主要合作客户包括西门子、新加坡航空公司、世邦魏理仕、思科等大型公司。此外，他还获得了包含美国数学建模竞赛一等奖、微软 Image Cup 亚军在内的十余个奖项，并发表 EI 国际会议论文 10 篇，SCI 国际期刊论文 2 篇。

被团队称作「妹妹」的梁馨予目前是南京大学大四在校学生，曾在德勤、麦肯锡等咨询公司实习，目前正在申请出国继续深造。

用猪脸识别技术降低死猪理赔成本

由于团队的题目是猪脸识别，最开始他们的商业构想也和大多数人一样，看到猪脸识别技术联想到通过监测猪的行为模式跟踪猪的健康状况。

为了进行客观的市场调研，团队成员梁馨予给养猪农场打电话，假借应聘赔保员的名义询问猪场的具体需求。在电话调查后发现，猪的活动空间很小，这一想法很难落地。而在与养猪老板的电话交流中，团队发现当前死猪理赔流程繁琐，出险成本高，且存在骗保情况。

News Report - Waste sorting system

https://tech.chinadaily.com.cn/a/201909/26/WS5d8c601ba31099ab995e282c.html

"千年等一回"队员王锴表示，由于本次比赛的模型均部署在华为云ＭｏｄｅｌＡｒｔｓ上进行统一测试，规则上便避免了测试漏洞。另外，在ＭｏｄｅｌＡｒｔｓ的帮助下，参赛选手还开发了小程序来让家人朋友参与到垃圾分类的Ｄｅｍｏ测试中，大赛的互动性和趣味性瞬间强化。队员杨剑飞则对垃圾分类算法的落地提出了展望，他表示，目前垃圾分类算法尚存在问题，例如缺乏大规模的垃圾数据集、垃圾图片中存在多种垃圾的混合影响、深度学习网络对从未见过的样本出现预测偏差等。基于以上问题，Ａｃｔｉｖｅ　Ｌｅａｒｎｉｎｇ的标注和基于Ｚｅｒｏ－Ｓｈｏｔ　Ｌｅａｒｎｉｎｇ的推测系统有望成为关键。借此，他希望行业能以华为云人工智能大赛·垃圾分类挑战杯为起点，研究者、工程师共同优化垃圾分类项目，为社会作出贡献。

大赛冠军团队"千年等一回"

News Report - Computer vision algorithm award

http://app.myzaker.com/news/article.php?pk=5fafdfbc1bc8e0b55f0000e5&f=zaker_live

发掘校园 AI 新势力 持续推动产学繁荣

人工智能时代，AI 人才、算法、数据、资源是推动产业发展的关键。本次大赛不仅为校园算法精英提供了基于真实业务场景的算法挑战，还提供了强大的算力支持。" 这个比赛特别好，参赛者与平台是一个相互促进的过程。通过比赛，运用数据算法解决业务场景中的实际问题，将理论知识与创新实战相结合，让 AI 技术真正落地应用并服务于行业。" 此次比赛 " 计算机视觉 " 一等奖获得者 " 小天天战队 " 的参赛者杨剑飞来自新加坡南洋理工大学，他表示，大赛激发校园算法精英创新创造，建立了赛事、产业、人才共赢的良好生态，助推产学繁荣发展。

News Report - Levitated mouse development

http://gd.sina.com.cn/yj/edu/2014-11-17/104611192.html

24小时只睡了40分钟

"PING PONG THE WORLD"的项目组员，除了周嘉俊和高策外，还有来自中山大学[微博]移动信息工程大三的学生杨剑飞，他是高策的小学同学。比赛当天凌晨才从广州飞到上海。

高策说，在抵达上组大之前，三人都还没有想好做什么，"我觉得还是(比赛)开始后头脑风暴做方案，更加有效。"直到比赛开始前1小时，3人才确定做"空中鼠标"，并完成分工。

15日下午2点，250名参赛"创客"进入15楼多功能大厅。滴滴答答的键盘声，小声的讨论声，此起彼伏。从下午3点到晚上11点，周嘉俊和两名队友一直在写代码，完成雏形之后，再联机调试并修改。次日凌晨1点多，杨剑飞有点熬不住了，便到地下一楼的沙发上休息。周嘉俊则多次下楼，走进旁边的24小时便利店。"250多人挤在一个大厅里，二氧化碳的浓度肯定太高了，我就到楼下吹吹凉风，或者买瓶咖啡提提神。"凌晨3点，周嘉俊找了张沙发睡了一觉。高策则一直坚持调试并修改，只在昨天中午才趴在桌子上眯了40分钟。

昨天上午，3人再次对"空中鼠标"进行调试，并多次向其他小组成员进行介绍，其他小组成员也会提出改进建议。来自加拿大一所大学的ADAM，就建议周嘉俊在项目中增加更加实用的文档共享功能。

周嘉俊认为，虽然说是比赛，其实大家更看重做出新东西的过程，在这个过程中，协作其实多于竞争。(记者 杨育才)