

CHI-JUI WU

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RESEARCH STATEMENT

My research interests include sensing technologies, mobile devices, ubiquitous computing, proxemic interaction, and machine learning. I build novel interactive systems for groups and multi-device environments, and leverage machine intelligence to improve human-computer interaction. Recently, I have developed a new tracking infrastructure that enables HCI researchers to build and evaluate proxemic-aware, activity and device-centric interfaces. In my further research, I would like to design and create new cross-device interactions for individuals and groups in various environments. I am also interested in the research field of computer science education.

EDUCATION

MRes. Computational Statistics and Machine Learning , Distinction University College London, United Kingdom Supervisors: Prof. Nicolai Marquardt, Prof. Steven Houben	2015 - 2016
BSc. Computer Science , First-Class Honours University of St Andrews, United Kingdom Supervisor: Prof. David Harris-Birtill	2011 – 2015

PUBLICATIONS

[C.1] **Wu, CJ.**, Houben, S., Marquardt, N. (2017) EagleSense: Tracking People and Devices in Interactive Spaces using Real-Time Top-View Depth-Sensing. To appear In *Proceedings of the 35th Annual ACM Conference on Human Factors in Computing Systems* (Denver, Colorado, USA, May 6 - 11, 2017). CHI '17. ACM, New York, NY, USA.

[J.1] **Wu, CJ.**, Quigley, A., Harris-Birtill, D. (2016) Out of Sight: A Toolkit for Tracking Occluded Human Joint Positions. In *Personal and Ubiquitous Computing*, 21(1), 125-135.

EMPLOYMENT EXPERIENCE

Research Intern, University of St Andrews, United Kingdom; Jisc Explored novel system infrastructures with virtual machines and continuous integration tools for software recomputation (recomputation.org) Supervisor: Prof. Ian Gent	June 2015 to September 2015
Research Intern, University of St Andrews, United Kingdom Developed and evaluated user interfaces with depth-sensing visualization feedback for group collaboration. Supervisors: Prof. Aaron Quigley, Prof. Per Ola Kristensson	June 2014 to September 2014

TEACHING EXPERIENCE

Teaching Assistant, Wanrong Junior High School, Hualien, Taiwan

Teaching English (middle school) in remote rural areas in Taiwan for substitute military service.

January 2016 to
January 2018

Tutor

TUTORING EXPERIENCE

Mathematics and Chemistry (High school), **Computer Science** (University), **English** (Elementary school)

2010 – Present

ACHIEVEMENTS & AWARDS

Honorable mention, University College London Data Science Student Challenge (United Kingdom)

02/2016

Best use of Mendeley API, Hack Cambridge (United Kingdom)

01/2016

Finalist, Barclays Openminds Hackathon (United Kingdom)

11/2013

First, J.P. Morgan Code for Good Challenge (United Kingdom)

11/2013

Dean's List, University of St Andrews (United Kingdom)

06/2015

Dean's List, University of St Andrews (United Kingdom)

06/2014

Presidential Award, American International School of Guangzhou (China)

06/2011

SKILLS

Git, TravisCI, Bash, Batch, Unix

Java, Python, C, C++, C#, Matlab, JavaScript, Go

OpenCV, EmguCV

Scikit-Learn, XGBoost, Keras

Numpy, Scipy, Pandas, Matplotlib, Seaborn

Markdown, HTML, CSS, Bootstrap, JQuery, WebGL, D3.js, Flask, Tornado, Django

Microsoft Kinect, Phidget, Arduino

Swing, JavaFX, WinForms, WPF

Vagrant

Unreal Engine, Phaser, pixi.js

Miscellaneous
Programming
languages
Computer vision
Machine learning
Scientific computing
Web technologies
Sensors and
hardware
GUI frameworks
Virtual machines
Game engines

POSITIONS OF RESPONSIBILITIES

Treasurer, University of St Andrews Computing Society (United Kingdom)

05/2014 – 05/2015

Secretary, University of St Andrews Psychology Society (United Kingdom)

05/2013 – 05/2014

Events coordinator, University of St Andrews Psychology Society (United Kingdom)

05/2012 – 05/2013

First-year representative, University of St Andrews Breakaway (Hill-Walking) Society (United Kingdom)

09/2011 – 12/2011