

CHI-JUI WU

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RESEARCH INTERESTS

My research interests are within Human Computer Interaction and Artificial Intelligence, including sensing technologies, mobile devices, ubiquitous computing, proxemic interaction, and machine learning. I build novel supporting toolkits for group collaborations and multi-device interactions, and leverage machine intelligence to enhance existing sensing capabilities within interactive spaces. 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 build new cross-device interactions to support ad-hoc individual and group work in public (office) and private (home) spaces.

EDUCATION

MRes. Computational Statistics and Machine Learning, Distinction 2015 – 2016
University College London, UK
Supervisors: Prof. Nicolai Marquardt, Prof. Steven Houben

BSc. Computer Science, First-Class Honours 2011 – 2015
University of St Andrews, UK
Supervisor: Prof. David Harris-Birtill

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.
- [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. Springer London.

RESEARCH EXPERIENCE

Research Intern, University of St Andrews, UK June 2015 – September 2015
Explored novel system infrastructures for software recomputation (recomputation.org).
Developed a web application to automatically build and run computer programs using virtual machines and continuous integration tools.
Supervisor: Prof. Ian Gent

Research Intern, University of St Andrews, UK June 2014 – September 2014
Investigated interactions between depth-sensing information visualization and user's ability to detect visual notifications and awareness of other surrounding users. Designed and conducted individual and group user studies with the interfaces developed.
Supervisors: Prof. Aaron Quigley, Prof. Per Ola Kristensson

TEACHING EXPERIENCE

English Teaching Assistant, Wanrong Junior High School, Hualien, Taiwan January 2017 – Present
Teaching in remote rural areas in Taiwan as substitute (compulsory) military service

Personal Tutor 2010 – Present
Mathematics and Chemistry (high school), Computer Science (undergraduate and graduate), English Writing (non-native speakers)

AWARDS

Honourable Mention, University College London Data Science Student Challenge, UK February 2016

Best Use of Mendeley API, Hack Cambridge, UK	January 2016
Dean's List, University of St Andrews, UK	June 2015
Dean's List, University of St Andrews, UK	June 2014
Finalist, Barclays Openminds Hackathon, UK	November 2013
Winner, J.P. Morgan Code for Good Challenge, UK	November 2013

SKILLS

Programming

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

User Interface

Swing, JavaFX, WinForms, WPF

Hardware

Microsoft Kinect, Phidget, Arduino

Computer Vision (OpenCV), **Machine Learning** (Scikit-Learn, Keras, XGBoost), **Scientific Computing** (Numpy, Scipy, Pandas, Matplotlib, Seaborn), **Information Visualization** (D3.js), **Graphics** (WebGL), **Mobile** (Android), **Web Front-End** (Markdown, HTML, CSS, Bootstrap, jQuery), **Web Back-End** (Flask, Tornado, Django), **Game** (Unreal, Phaser, pixi.js), **Version Control** (Git, TravisCI), **Word Processing** (LaTeX), **Operating System** (UNIX), **Virtual Machine, Container** (Vagrant, Docker)

POSITIONS OF RESPONSIBILITIES

Treasurer, University of St Andrews Computing Society, UK	2014 – 2015
Secretary, University of St Andrews Psychology Society, UK	2013 – 2014
Events Coordinator, University of St Andrews Psychology Society, UK	2012 – 2013
First-year Rep, University of St Andrews Breakaway (Hill-Walking) Society, UK	2011 – 2011