|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CHI-JUI WU** | | | | |
| Wanrong Junior High School  1 Changqiao Road, Fenglin Town  Hualien County 975, Taiwan | | | **WEBSITE** <http://chijuiwu.space>  **EMAIL** [chijui@chijuiwu.space](mailto:chijui@chijuiwu.space)  **GITHUB** [@cjw-charleswu](http://github.com/cjw-charleswu) | |
|  | | | | |
| **RESEARCH INTERESTS**  My research interests are in Human-Computer Interaction and Artificial Intelligence, including sensing technologies, mobile devices, smart spaces, ubiquitous computing, proxemic interaction, tangible interfaces 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 *EagleSense* [C.1] 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 large-scale ad hoc individual and group work in public and private spaces. This includes doing in-the-wild research and deployment. | | | | |
|  | | | | |
| **EDUCATION**  **MRes. Computational Statistics and Machine Learning,** Distinction  University College London, UK  Supervisors: Professor Nicolai Marquardt, Professor Steven Houben  **BSc. Computer Science,** First-Class Honours  University of St Andrews, UK  Supervisor: Professor David Harris-Birtill | | | | 2015 – 2016  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. | | |
| **[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 College London, UK**  Explored research areas and tools within physical computing, ubiquitous computing, proxemic interaction, and sensor-based systems. Adapted computer vision and machine learning algorithms to develop non-invasive tracking systems for ad hoc proxemic interaction.  Supervisors: Professor Nicolai Marquardt, Professor Steven Houben, Frederik Brudy  **Research Intern, University of St Andrews, UK**  Explored computer system infrastructures for software recomputation. Developed a web application that takes a GitHub repository URL as input and creates a virtual machine from scratch, where the computer program is rebuilt from source.  Supervisor: Professor Ian Gent  **Research Intern, University of St Andrews, UK**  Investigated interactions between depth-sensing data visualization and user’s ability to detect visual notifications and their awareness of other surrounding users. Designed and conducted individual and group user studies with the interface developed, focusing on tasks that require the awareness of other users’ spatial location.  Supervisors: Professor Aaron Quigley, Professor Per Ola Kristensson | | | | November 2015 –  September 2016  June 2015 –  September 2015  June 2014 –  September 2014 |
|  | | | | |
| **TEACHING EXPERIENCE**  **English Teaching Assistant, Wanrong Junior High School, Hualien, Taiwan**  Teaching in remote rural areas in Taiwan as substitute (compulsory) military service  **Personal Tutor**  Mathematics and Chemistry (high school), Computer Science (undergraduate and graduate), English Writing (non-native speakers) | | | | January 2017 –  Present  January 2010 –  Present |
|  | | | | |
| **AWARDS**  Honourable Mention, University College London Data Science Student Challenge, UK  Best Use of Mendeley API, Hack Cambridge, UK  Dean’s List, University of St Andrews, UK  Dean’s List, University of St Andrews, UK  Finalist, Barclays Openminds Hackathon, UK  Winner, J.P. Morgan Code for Good Challenge, UK | | | | February 2016  January 2016  June 2015  June 2014  November 2013  November 2013 |
|  | | | | |
| **SCHOLARSHIPS AND GRANTS**  ACM SIGCHI Student Travel Grant for ISS’16 ($1,500)  International Undergraduate Scholarship, University of St Andrews, UK (£2,500 / year) | | | | 2016  2011 – 2015 |
|  | | | | |
| **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, Processing), **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) | | | | |
|  | | | | |
| **COURSES**  **University College London**  Supervised Learning, Graphical Models, Advanced Topics in Machine Learning, MRes Computational Statistics and Machine Learning Dissertation, Investigating Research, Research Professional Development  **University of St Andrews**  Computer Science (Year 1), Internet Programming, Mathematics (Year 1), Psychology (Year 1 and 2), Reasoning and Knowledge, Foundations of Computation, Advanced Computer Science, Software Engineering, Computational Complexity, Major Software Team Project, Operating Systems, Artificial Intelligence, Human Computer Interaction, Component Technology, Logic and Software Verification, Computer Graphics, Multimedia, Constraint Programming, Artificial Intelligence Practice, Human Computer Interaction Practice, Major Software Project | | | | |
|  | | | | |
| **POSITIONS OF RESPONSIBILITIES**  Treasurer, University of St Andrews Computing Society, UK  Secretary, University of St Andrews Psychology Society, UK  Events Coordinator, University of St Andrews Psychology Society, UK  First-year Rep, University of St Andrews Breakaway (Hill-Walking) Society, UK | | | | 2014 – 2015  2013 – 2014  2012 – 2013  2011 – 2011 |