

CHAOFAN WANG

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EDUCATION

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| Ph.D. Candidate of Human-Computer Interaction The University of Melbourne | February 2019 - Present |
| Master of Information Technology (with Distinction) The University of Melbourne | February 2017 - December 2018 |
| Bachelor of Computer Science Hangzhou Dianzi University | September 2012 - June 2016 |

INTERESTS AND SKILLS

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| Research Interests | Human-Computer Interaction, Ubiquitous Computing, Medical Informatics |
| Program Languages | Python, Java, C/C++, SQL, Prolog |
| Technical Skills | Wearable Sensing (IMU, sEMG), Environmental Sensing (RGB camera, Thermal camera, Depth camera), Image Process (OpenCV), Android Development |
| Analysis Skills | Statistical Analysis, Machine Learning (TensorFlow, PyTorch, XGBoost, scikit-learn), Data Storage (Hadoop, Hive, MapReduce, MySQL), Data Visualization |
| Languages | Chinese (native), English (fluent, IELTS - 7.0) |

WORK EXPERIENCE

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| Murdoch Children's Research Institute (MCRI) <i>Research Associate</i> | February 2020 - Present <i>Melbourne, Australia</i> |
| · Worked on Using Ubiquitous Sensing to Detect Episodes of Hand Hygiene (Field Study). | |
| The University of Melbourne <i>Head Tutor - COMP90018 (Mobile Computing Systems Programming)</i> | July 2019 - Present <i>Melbourne, Australia</i> |
| · Delivered tutorials to 110 students for Android application development. | |
| · Redesigned teaching materials used in the tutorials. | |
| ArcSoft <i>Software Quality Assurance Intern</i> | February 2016 - July 2016 <i>Hangzhou, China</i> |
| · Contributed to the automatic testing programs for Samsung's and LG's panorama cameras. | |
| · Recorded and summarize test cases for future product tests. | |

PROJECTS

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| Using Computer Vision to Measure Quality of Hand Hygiene | October 2019 - Present |
| · Detect the hand surface coverage with antiseptic products after hand hygiene by environmental sensors, e.g., thermal camera and RGB camera; | |
| · Apply computer vision algorithms to measure the corresponding hand hygiene quality in medical settings. | |
| Using Wearable Sensor to Detect Episodes of Hand Hygiene | February 2019 - Present |
| · Detect episodes of hand hygiene with machine learning algorithms by wearable sensors, e.g., IMU and sEMG; | |
| · Examine the feasibility of monitoring the frequency and thoroughness of hand hygiene practices in medical settings. | |

Using Environment and Calendar Data to Predict Emergency Admissions February 2019 - Present

- Design machine learning algorithms to predict emergency department admissions through environment data, calendar variables, and history admission records;
- Optimize the personnel flow in hospitals' emergency departments and determine the relevance of environment and calendar data towards emergency admissions.

iTime (time management application)

December 2017 - October 2018

Major Master Project Work

- iTime is a time management application, and its functions include managing private affairs, negotiating time slots of meetings, and publishing public events, etc.;
- Roles: 1) Developed Android application; 2) Adopted open-source frameworks to improve application performance; 3) Tested and fixed bugs from the previous versions.

RESEARCH PUBLICATIONS

1. **Chaofan Wang**, Weiwei Jiang, Kangning Yang, Difeng Yu, Joshua Newn, Zhanna Sarsenbayeva, Jorge Goncalves, and Vassilis Kostakos. Electronic monitoring systems for hand hygiene: Systematic review of technology. *Journal of Medical Internet Research*, 23(11):e27880, Nov 2021 (Impact factor: 5.43)
2. Kangning Yang, **Chaofan Wang**, Yue Gu, Zhanna Sarsenbayeva, Benjamin Tag, Tilman Dingler, Greg Wadley, and Jorge Goncalves. Behavioral and physiological signals-based deep multimodal approach for mobile emotion recognition. *IEEE Transactions on Affective Computing*, pages 1–1, 2021 (Impact factor: 8.01)
3. Weiwei Jiang, Zhanna Sarsenbayeva, Niels van Berkel, **Chaofan Wang**, Difeng Yu, Jing Wei, Jorge Goncalves, and Vassilis Kostakos. User trust in assisted decision-making using miniaturized near-infrared spectroscopy. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, New York, NY, USA, 2021. Association for Computing Machinery (CORE - A*)
4. Difeng Yu, Weiwei Jiang, **Chaofan Wang**, Tilman Dingler, Eduardo Velloso, and Jorge Goncalves. Shadowdancxr: Body gesture digitization for low-cost extended reality (xr) headsets. In *Companion Proceedings of the 2020 Conference on Interactive Surfaces and Spaces*, page 79–80, New York, NY, USA, 2020. Association for Computing Machinery (ISS EA)
5. Kangning Yang, **Chaofan Wang**, Zhanna Sarsenbayeva, Benjamin Tag, Tilman Dingler, Greg Wadley, and Jorge Goncalves. Benchmarking commercial emotion detection systems using realistic distortions of facial image datasets. *The Visual Computer*, pages 1–20, 2020
6. **Chaofan Wang**, Zhanna Sarsenbayeva, Xiuge Chen, Tilman Dingler, Jorge Goncalves, and Vassilis Kostakos. Accurate measurement of handwash quality using sensor armbands: Instrument validation study. *JMIR Mhealth Uhealth*, 8(3):e17001, Mar 2020 (Impact factor: 4.77)
7. **Chaofan Wang**, Zhanna Sarsenbayeva, Chu Luo, Jorge Goncalves, and Vassilis Kostakos. Improving wearable sensor data quality using context markers. In *International Joint Conference on Pervasive and Ubiquitous Computing*, UbiComp Adjunct, 2019 (UbiComp EA)
8. Qiushi Zhou, Joshua Newn, Benjamin Tag, Hao-Ping Lee, **Chaofan Wang**, and Eduardo Velloso. Ubiquitous smart eyewear interactions using implicit sensing and unobtrusive information output. In *International Joint Conference on Pervasive and Ubiquitous Computing*, UbiComp Adjunct, 2019 (UbiComp EA)

ACADEMIC SERVICE

Reviewer for IMWUT, Journal of Medical Internet Research, JMIR mHealth and uHealth, BMJ Innovations, etc.

AWARDS AND SCHOLARSHIPS

Research Training Program Scholarship
The University of Melbourne

2019 - 2022

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| Dean's Honours List The University of Melbourne | 2018 |
| Commonwealth Supported Place The University of Melbourne | 2018 - 2019 |
| Third Prize Scholarships Hangzhou Dianzi University | 2012 - 2015 |