Wanling Cai

cswlcai@comp.hkbu.edu.hk | 852-59692185 | [Personal Homepage](#)

DLB625, David C. Lam Building, Shaw Campus, Hong Kong Baptist University

Kowloon Tong, Kowloon, Hong Kong

EDUCATION

Hong Kong Baptist University (HKBU)   Hong Kong, China

Ph.D. Student in Department of Computer Science   *September 2018 - Present (Expected in September 2022)*

Shenzhen University (SZU)   Shenzhen, Guangdong, China

B.Eng.(Hons) in Software Engineering at College of Computer Science and Software Engineering   *October 2014 - June 2018*

RESEARCH INTERESTS

- Human-Centered AI, Conversational Agents, Recommender Systems, Human-Computer Interaction, Health and Well-being

SUBMITTED MANUSCRIPTS

- Yucheng Jin†, **Wanling Cai**†, Li Chen, Yuwan Dai, Tonglin Jiang. Understanding Disclosure and Support in Social Music Communities for Youth Mental Health. *ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW)*. (under review)

- Yucheng Jin, Li Chen, Xianglin Zhao, **Wanling Cai**. The Way You Test Me Matters: Exploring Self-Assessment Quiz Design in Mental Health Chatbots. (in revision)

PUBLICATIONS

- Li Chen, **Wanling Cai**, Dongning Yan and Shlomo Berkovsky. Eye-Tracking based Personality Prediction on Recommendation Interfaces. *User Modeling and User-Adapted Interaction (UMUAI)*, 2022. (To appear)

- **Wanling Cai**, Yucheng Jin and Li Chen. Impacts of Personal Characteristics on User Trust in Conversational Recommender Systems. In: *Proceedings of the 40th ACM Conference on Human Factors in Computing Systems (CHI' 22)*, New Orleans, LA, USA, April 30-May 5, 2022. [**Honourable Mention**]

- **Wanling Cai**, Yucheng Jin and Li Chen. Task-oriented User Evaluation on Critiquing-based Recommendation Chatbots. *IEEE Transactions On Human-Machine Systems (THMS)*, pages 1-13, 2022.

- Yucheng Jin, Li Chen, **Wanling Cai** and Pearl Pu. Key Qualities of Conversational Recommender Systems: From Users' Perspective. In: *Proceedings of the 9th International Conference on Human-Agent Interaction (HAI' 21)*, Virtual Event, Japan, November 9-11, 2021.

- **Wanling Cai**, Yucheng Jin and Li Chen. Critiquing for Music Exploration in Conversational Recommender Systems. In: *Proceedings of 26th ACM Conference on Intelligent User Interface (IUI' 21)*, College Station, TX, USA, April 14-17, 2021.

- Jannach, Dietmar, Ahtsham Manzoor, **Wanling Cai**, and Li Chen. A Survey on Conversational Recommender Systems. *ACM Computing Surveys (CSUR)*, 54(5), pages 1-36, 2021.

- **Wanling Cai** and Li Chen. Predicting User Intents and Satisfaction with Dialogue-based Conversational Recommendations. In: *Proceedings of 28th ACM Conference on User Modeling, Adaptation and Personalization (UMAP' 20)*, Genoa, Italy, July 14-17, 2020. [**Best Student Paper Award**]

- **Wanling Cai** and Li Chen. Towards a Taxonomy of User Feedback Intents for Conversational Recommendations. In: *Proceedings of 13th ACM Conference on Recommender Systems (RecSys' 19), Late-Breaking Results*, Copenhagen, Denmark, September 16-20, 2019.

- Yucheng Jin, **Wanling Cai**, Li Chen, Nyi Nyi Htun, and Katrien Verbert. MusicBot: Evaluating Critiquing-based Music Recommenders with Conversational Interaction. In: *Proceedings of 28th ACM International Conference on Information and Knowledge Management (CIKM' 19)*, Beijing, China, November 3-7, 2019. (Acceptance rate: 19.4%)

- **Wanling Cai**, Jiongbin Zheng, Weike Pan, Jing Lin, Lin Li, Li Chen, Xiaogang Peng, and Zhong Ming. Neighborhood-Enhanced Transfer Learning for One-Class Collaborative Filtering. *Neurocomputing* (0925-2312), vol. 341, pages 80-87, 2019.

- Weike Pan, Qiang Yang, **Wanling Cai**, Yaofeng Chen, Qing Zhang, Xiaogang Peng and Zhong Ming. Transfer to Rank for Heterogeneous One-Class Collaborative Filtering. *ACM Transactions on Information Systems (TOIS)* (1046-8188), 37(1):10:1-10:20, January 2019.

- Jixiong Liu, Jiakun Shi, **Wanling Cai**, Bo Liu, Weike Pan, Qiang Yang and Zhong Ming. Transfer Learning from APP Domain to News Domain for Dual Cold-Start Recommendation (Short Paper). In: *Proceedings of the 1st Workshop on Intelligent Recommender Systems by Knowledge Transfer & Learning (RecSysKTL 2017) co-located with the 11th ACM Conference on Recommender Systems (RecSys' 17)*, Como, Italy, August 27-31, 2017.

RESEARCH EXPERIENCE

HCI-RecSys Research Group in Department of Computer Science, HKBU Hong Kong, China
Ph.D. Candidate (Supervisor: Dr. Li CHEN) *September 2018 - Present*

- Research focus: Human-centered design and evaluation of conversational recommender systems
  - ∗ Investigated how user express their feedback on the recommendation in natural language based on grounded theory. (RecSys 2019 LBR)
  - ∗ Developed a dedicated intent and satisfaction prediction model in the dialogue-based conversational recommender system using various machine learning methods. (UMAP 2020)
  - ∗ Investigated how users' personal characteristics influence users' interaction behaviour as well as the perception of the critiquing-based music recommender system with conversational interaction. (CIKM 2019)
  - ∗ Did a collaborative survey on conversational recommender system, mainly responsible for the section of computational task. (CSUR 2021)
  - ∗ Designed two kinds of system-suggested critiquing technique: progressive system-suggested critiquing and cascading system-suggested critiquing for facilitating users' exploration of music. (IUI 2021)
  - ∗ Investigated the effect of task type and critiquing techniques on user perception of and interaction with critiquing-based recommendation chatbots with two task-oriented user studies. (IEEE THMS 2022)
  - ∗ Investigated how the three types of factors (user-related, system-related, and context-related) influence user trust toward conversational recommender systems. (CHI 2022)

Big Data Institute at College of Computer Science and Software Engineering, SZU Shenzhen, Guangdong, China
Research Assistant (Advisor: Dr. Weike Pan) *July 2016 - June 2018*

- Implementations and Extensions of Recommendation Algorithms
  - ∗ Implemented and extended recommendation approaches with explicit feedback, implicit feedback and heterogeneous feedback for both rating prediction problem and Top-N ranking problem.
- Customer Flow Forecasts on Koubei.com of IJCAI 2017 Tianchi Contest
  - ∗ Employed XGBoost to forecast customer flow with feature engineering techniques.
- Transfer Learning for Collaborative Filtering
  - ∗ Proposed a novel transfer to rank algorithm for heterogeneous one-class collaborative filtering. (TOIS 2019)
  - ∗ Proposed a novel transfer learning solution by neighborhood-enhanced factorization for one-class collaborative filtering. (Neurocomputing 2019)
- Transfer Learning for News Recommendation
  - ∗ Proposed a news recommendation approach for cold-start users based on transfer learning. (RecSysKTL 2017)
- Deep Learning for Time Series Analysis *(Co-Advisor: Dr. Haiqin Yang)*
  - ∗ Adopted deep learning approaches to predict time series data.
- Sequence-aware Recommender Systems
  - ∗ Undergraduate thesis: Collaborative Filtering with Sequential Information for Next-Item Recommendation

INTERNSHIP

Tencent Holdings Limited Shenzhen, Guangdong, China
Algorithm Intern (Machine Learning), Mobile Internet Group *March 2018 - May 2018*

- Conducted a survey on sequence-aware recommender systems

Suishou Technology Co., Ltd, Feidee Shenzhen, Guangdong, China
Intern, Kai Niu Business Group *May 2017 - June 2017*

- Completed a short-term specific project on credit card recommendation

Professional Services

- Conference Organization
  - Publicity Co-Chair of The 20th International Conference on Mobile and Ubiquitous Multimedia (MUM' 21)
- Conference Reviewer
  - 16th ACM Recommender Systems Conference (RecSys' 22), 2022 (Program Committee)
  - 20th International Conference on Mobile and Ubiquitous Multimedia (MUM' 21), 2021 (Program Committee)
  - The Web Conference (WWW), 2019, (External Reviewer)
- Invited Journal Reviewer
  - ACM Transactions on Interactive Intelligent Systems (TIIS), 2021
  - Journal of Intelligent Information Systems (JIIS), 2021
  - Frontier in Artificial Intelligence, 2021
  - Neurocomputing (NEUCOM), 2020
  - Knowledge-Based Systems (KBS), 2018 & 2020 & 2021
- Invited Talk
  - "Personal Experience in Academic Writing and Presentation", COMP7160 Research Methods at Department of Computer Science, Hong Kong Baptist University, Hong Kong, P.R. China, November 2, 2021.
  - "Design and Evaluation of Conversational Agent", Department of Journalism, Hong Kong Baptist University, Hong Kong, P.R. China, April 21, 2021.
  - "Conversational Agents: Introduction, Design and Evaluation", Department of Journalism, Hong Kong Baptist University, P.R. Hong Kong, China, April 2, 2020
- Book Review
  - Review of book chapter translation: Marco de Gemmis, Pasquale Lops, Cataldo Musto, Fedelucio Narducci, and Giovanni Semeraro. Semantics-Aware Content-Based Recommender Systems. *Chapter 4 of Recommender Systems Handbook (Second Edition)*, Springer, 2015.
  - Review of book chapter translation: Gediminas Adomavicius and YoungOk Kwon. Multi-Criteria Recommender Systems. *Chapter 25 of Recommender Systems Handbook (Second Edition)*, Springer, 2015.

Teaching Assistant

- COMP 4135/7240 Recommender Systems [2021-2022 S2]
- COMP 4136 Natural Language Processing [2021-2022 S1]
- COMP 1006 Facets of Computing [2021-2022 S1]
- COMP 3925 Data Analysis Studio [2019-2020 S2; 2020-2021 S2]
- COMP 2865 Fundamental of Data Analysis and Management [2019-2020 S1; 2020-2021 S1]
- COMP 4015/7015 Artificial Intelligence and Machine Learning [2018-2019 S2]

Skills

- **Languages**: Mandarin (native), English (fluent)
- **Research methods**: User experience (UX) research (e.g., survey, interview), thematic analysis (MAXQDA), statistical analysis (e.g., ANOVA, SEM), machine learning methods (e.g., LR, SVM, XGBoost, CNN)
- **Programming language**: Python (Scikit-Learn, NLTK, Gensim, Numpy, Pandas, PyTorch), R, Java, Javascript, Matlab (ordered by proficiency)
- **Platform and tools**: LaTex, DialogFlow, MongoDB, Jupyter Notebook

Academic Honors and Awards (Since 2018-06)

- Best Paper Honourable Mention Award at ACM CHI 2022
- The James Chen Best Student Paper Award at ACM UMAP 2020
- Computer Science Department RPg Performance Award, HKBU-COMP, 2021
- Best Presentation Award, The 24rd Research Postgraduate Symposium (PG Day), HKBU-COMP, 2021
- Computer Science Department RPg Performance Award, HKBU-COMP, 2020
- Best Presentation Award, The 23rd Research Postgraduate Symposium (PG Day), HKBU-COMP, 2020
- Excellent Teaching Assistant Performance Award, HKBU-COMP, 2019 & 2020 & 2021 & 2022
- Teaching Assistant Performance Award, HKBU-COMP, 2020 & 2021
- "Outstanding Graduate" in Shenzhen University, China, 2018

Extracurricular Activities

Shenzhen University Volunteers Association   Shenzhen, Guangdong, China
Core Member & Head of organization department   *October 2014 - June 2016*
- Directed "Chu Peng Zhu Xue" (Top 100 volunteer projects in Shenzhen)

Firefly Project (an aid education project) in Shenzhen University   Shenzhen, Guangdong, China
Participant   *November, 2015 - January. 2016*
- Participated a volunteer teaching project in Guangdonng Province for 15 days.

References

- Dr. Li Chen, Associate Professor, Department of Computer Science, Hong Kong Baptist University
  Email: lichen@comp.hkbu.edu.hk
  Homepage: http://www.comp.hkbu.edu.hk/~lichen
- Dr. Yucheng Jin, Research Assistant Professor, Department of Computer Science, Hong Kong Baptist University
  Email: yuchengjin@hkbu.edu.hk
  Homepage: http://yucheng.gold/
- Dr. Weike Pan, Associate Professor, College of Computer Science and Software Engineering, Shenzhen University
  Email: panweike@szu.edu.cn
  Homepage: https://csse.szu.edu.cn/staff/panwk/

Last change: August 18, 2022