

April Yi Wang

Ph.D. Candidate in School of Information, University of Michigan

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(updated Aug 2022)

Research Interests

Human-Computer Interaction; Programming Support; Collaborative Data Science

Education

09/2018 – present **University of Michigan**

Ann Arbor, MI PhD in Information Science

Advisors: Steve Oney and Christopher Brooks

Committee: Cyrus Omar, Philip Guo, and Steven Drucker

09/2016 – 07/2018 **Simon Fraser University**

Burnaby, Canada MSc in Computer Science (thesis [T.01](#) below)

Advisor: Parmit Chilana

Committee: Philip Guo and Lyn Bartram

09/2013 – 07/2016 **Zhejiang University**

Hangzhou, China B.Eng in the College of Computer Science & Chu Kochen Honors College

Professional Experience

09/2018 – present **School of Information, University of Michigan**

Ann Arbor, MI Graduate Student Researcher

05/2021 – 08/2021 **Microsoft Research**

Redmond, WA Research Summer Intern at the Visualization and Interactive Data Analytics (VIDA) Group

Mentors: Steven Drucker and Rob DeLine

05/2020 – 08/2020 **IBM Research**

Cambridge, MA Research Summer Intern at the AI Experience Group

Mentors: Dakuo Wang and Michael Muller

09/2016 – 07/2018 **School of Computing Science, Simon Fraser University**



Burnaby, Canada Graduate Student Researcher

Awards

- 2022 EECS Rising Stars
- 2022 Heidelberg Laureate Forum Young Researcher
- 2019-2022 Special Recognitions for Outstanding Reviews, ACM CSCW and CHI
- 2020 Best Short Paper Award, IEEE VL/HCC
- 2020 Honourable Mention Award, ACM CHI
- 2019 Best Paper Award, ACM CSCW
- 2018 Honourable Mention Award, ACM CHI
- 2019 UMSI Pre-candidacy Project Milestone Distinction Award
- 2021 Rackham Graduate Student Research Grant
- 2018, 2016 Computing Science Graduate Fellowship, Simon Fraser University

Publications

Labels:

-  Best Paper Honorable Mention
-  Best Paper Award

Approximate Acceptance Rates:

CSCW: 25%, CHI: 23%, TOCHI: 22%, VL/HCC: 30%, IUI: 24%, ICSE: 20%

Heavily-reviewed Journal Manuscripts (J)

- J.05 **April Yi Wang***, Dakuo Wang*, Jaimie Drozdal, Michael Muller, Soya Park, Justin D. Weisz, Xuye Liu, Lingfei Wu, and Casey Dugan. Documentation Matters: Human-Centered AI System to Assist Data Science Code Documentation in Computational Notebooks *ACM Transactions on Computer-Human Interaction (TOCHI 2021)*
- J.04 **April Yi Wang***, Yan Chen*, John Chung, Christopher Brooks, and Steve Oney. PuzzleMe: Leveraging Peer Assessment for In-Class Programming Exercises. *In Proceedings of the ACM : Human-Computer Interaction, Computer-Supported Cooperative Work and Social Computing (CSCW 2021)*
- J.03 David Piorkowski, Soya Park, **April Yi Wang**, Dakuo Wang, Michael Muller, and Felix Portnoy. How AI Developers Overcome Communication Challenges in a Multidisciplinary Team: A Case Study. *In Proceedings of the ACM : Human-Computer Interaction, Computer-Supported Cooperative Work and Social Computing (CSCW 2021)*

- 🏆 J.02 **April Yi Wang**, Anant Mittal, Christopher Brooks and Steve Oney. How Data Scientists Use Computational Notebooks for Real-Time Collaboration. *In Proceedings of the ACM : Human-Computer Interaction, Computer-Supported Cooperative Work and Social Computing (CSCW 2019)* **Best Paper Award**
- J.01 Laton Vermette, Shruti Dembla, **April Yi Wang**, Joanna McGrenere and Parmit K. Chilana. (2018) Social CheatSheet: An Interactive Community-Curated Information Overlay for Web Applications. *In Proceedings of the ACM: Human-Computer Interaction (1,1), Computer-Supported Cooperative Work and Social Computing (CSCW 2018)*

Heavily-reviewed Conference Papers (C)

- C.10 Will Epperson, **April Yi Wang**, Robert DeLine, and Steven M. Drucker. Strategies for Reuse and Sharing among Data Scientists in Software Teams *In Proceedings of the ACM/IEEE 44th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP 2022)*
- C.09 Chengbo Zheng, Dakuo Wang, **April Yi Wang**, and Xiaojuan Ma. Telling Stories from Computational Notebooks: AI-Assisted Presentation Slides Creation for Presenting Data Science Work *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022)*
- C.08 **April Yi Wang**, Will Epperson, Robert DeLine, and Steven M. Drucker. Diff in the Loop: Supporting Data Comparison in Exploratory Data Analysis *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022)*
- C.07 Xuye Liu*, Dakuo Wang*, **April Yi Wang**, Yufang Hou, and Lingfei Wu. HAConvGNN: Hierarchical Attention Based Convolutional Graph Neural Network for Code Documentation Generation in Jupyter Notebooks *In Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing: Findings (EMNLP 2021)*
- C.06 **April Yi Wang**, Dakuo Wang, Xuye Liu, and Lingfei Wu. Graph-Augmented Code Summarization in Computational Notebooks. *In Proceedings of 30th International Joint Conferences on Artificial Intelligence (IJCAI 2021): System Demonstrations*
- C.05 Soya Park, **April Yi Wang**, Ban Kawas, Q. Vera Liao, David Piorkowski, and Marina Danilevsky. Facilitating knowledge sharing from domain experts to data scientists for building NLP models. *In Proceedings of the 26th International Conference on Intelligent User Interfaces (IUI 2021)*
- 🏆 C.04 Yan Chen, Jaylin Herskovitz, Gabriel Matute, **April Wang**, Sang Won Lee, and Steve Oney. EdCode: Towards Personalized Support at Scale for Remote Assistance in CS Education. *In Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2020)* **Best Paper Award**
- 🏆 C.03 **April Yi Wang**, Zihan Wu, Christopher Brooks and Steve Oney. Callisto: Capturing the "Why" by Connecting Conversations with Computational Narratives. *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2020)* **Best Paper Honorable Mention**

- C.02 **April Yi Wang** and Parmit K. Chilana. Designing Curated Conversation-Driven Explanations for Communicating Complex Technical Concepts. *In Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2019)*
- 🏆 C.01 **April Yi Wang**, Ryan Mitts, Philip J. Guo and Parmit K. Chilana. Mismatch of Expectations: How Modern Learning Resources Fail Conversational Programmers. *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)* **Best Paper Honorable Mention**

Refereed Posters (P) and Workshops (W)

- W.05 **April Y. Wang**. Improving Real-time Collaborative Data Science Through Context-Aware Mechanisms. *In Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2022), Graduate Consortium. 2022*
- P.04 **April Y. Wang**, Dakuo Wang, Jaimie Drozdal, Xuye Liu, Soya Park, Steve Oney and Christopher Brooks. (2021) What Makes a Well-Documented Notebook? A Case Study of Data Scientists' Documentation Practices in Kaggle. *In CHI Conference on Human Factors in Computing Systems Extended Abstracts (CHI 2021 Extended Abstracts)*
- W.03 Michael Muller, **April Yi Wang**, Steven I. Ross, Justin D. Weisz, Mayank Agarwal, Kartik Talamadupula, Stephanie Houde, Fernando Martinez, John Richards, Jaimie Drozdal, Xuye Liu, David Piorkowski and Dakuo Wang. How Data Scientists Improve Generated Code Documentation in Jupyter Notebooks *Workshop on Human-AI Co-Creation with Generative Models at ACM Conference on Intelligent User Interface (IUI 2021)*
- W.02 **April Y. Wang**, Steve Oney and Christopher Brooks. Redesigning Notebooks for Data Science Education. *Workshop on Human-Centered Study of Data Science Work Practices at ACM Conference on Human Factors in Computing Systems (CHI 2019)*
- P.01 **April Y. Wang** and Parmit K. Chilana. Investigating Learning Strategies of Conversational Programmers. *International Conference on Computing Education Research (ICER 2017 Posters)*

Theses (T)

- T.01 **April Yi Wang**. (2018). Understanding and Lowering the Learning Barriers for Conversational Programmers. *SFU M.Sc Thesis, Burnaby, Canada.*

Service

Program Committee

- 2022 ACM Conference on Human Factors in Computing Systems (CHI), Late Breaking Work
- 2022 International Conference on Learning Analytics And Knowledge (LAK)
- 2021 ACM Conference on Human Factors in Computing Systems (CHI), Late Breaking Work
- 2020 Artificial Intelligence in Education(AIED)

Peer Reviewing

Labels:

🏆 *Special Recognitions for Outstanding Reviews*

- 2019 – 2022 ACM Conference on Human Factors in Computing Systems (CHI) 🏆
- 2019 – 2022 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 🏆
- 2020 – 2022 ACM Symposium on User Interface Software and Technology (UIST)
- 2021-2022 ACM Transactions on Computer-Human Interaction (TOCHI)
- 2020 – 2022 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)
- 2022 The Journal of Computer Languages (COLA)
- 2020 ACM Transactions on Interactive Intelligent Systems (TiiS)
- 2019 ACM Conference on Tangible, Embedded, and Embodied Interactions (TEI)
- 2019 – 2020 Artificial Intelligence in Education(AIED)
- 2022 International Conference on Learning Analytics And Knowledge (LAK)

Operations Committee

- 2021 ACM CHI session chair
- 2021 Conference on Neural Information Processing Systems(NeurIPS) student volunteer
- 2019, 2021, 2022 ACM CHI student volunteer
- 2020 ACM UIST student volunteer

UMSI

- 2022-2023 University of Michigan Interactive and Social Computing (MISC) Student Coordinator
- 2022 Organizer of the UMSI Annual CHI Peer Review event

Teaching

University of Michigan

- Winter 2021 Graduate Student Instructor – SI 579 (Building Interactive Applications)

Spring 2018 Teaching Assistant – CMPT 363 (User Interface Design)

Spring 2017 Teaching Assistant – CMPT 363 (User Interface Design)

Patent

08/2020 Dakuo Wang, Lingfei Wu, Xuye Liu, **April Yi Wang**, Chuang Gan, Jing Xu, Xue Ying Zhang, Jun Wang, Jing James Xu. Learning-Based Automated Machine Learning Code Annotation with Graph Neural Network. *IBM. Filed 2020. 17/088018.*

08/2020 Dakuo Wang, Lingfei Wu, **April Yi Wang**, Xuye Liu, Chuang Gan, Si Er Han, Bei Chen, Ji Hui Yang. Learning-Based Automated Machine Learning Code Annotation in Computational Notebooks. *IBM. Filed 2020. 17/069402.*

References

Steve Oney | soney@umich.edu

Assistant Professor of School of Information at the University of Michigan

Christopher Brooks | brooks@umich.edu

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