

# April Yi Wang

Assistant Professor in the Department of Computer Science, ETH Zürich

ETH Zürich / CAB F 15.2  
Universitätstrasse 6  
Zürich, 8006

<https://aprilwang.me>  
[april.wang@inf.ethz.ch](mailto:april.wang@inf.ethz.ch)  
(updated Jan 2025)

## Research Interests

Human-Computer Interaction; Educational Technology; Computer Science Education

## Education

09/2018 – 08/2023 **University of Michigan**  
Ann Arbor, MI Ph.D. in Information Science (thesis T.02 below)  
Advisors: Steve Oney and Christopher Brooks  
Committee: Cyrus Omar, Philip Guo, and Steven Drucker

09/2016 – 07/2018 **Simon Fraser University**  
Burnaby, Canada M.Sc. 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

11/2023 – present **Department of Computer Science, ETH Zürich**  
Zürich, Switzerland Assistant Professor

09/2018 – 08/2023 **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

- 2023 Gary M. Olson Award, UMSI
- 2023 Honourable Mention Award, ACM CHI
- 2022 Rising Stars in EECS
- 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
- 2016, 2018 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%, MSR: 26%

### 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.16 Shuai Ma, Junling Wang, Yuanhao Zhang, Xiaojuan Ma, **April Yi Wang**. DBox: Scaffolding Algorithmic Programming Learning through Learner-LLM Co-Decomposition In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2025)*
- C.15 Matin Yarmand, Udayan Tandon, Courtney Reed, Eric Hekler, Nadir Weibel, **April Yi Wang**. Dialogic and On-Demand Metaphors for Interdisciplinary Reading In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2025)*
- C.14 Anjali Khurana, Xiaotian Su, **April Yi Wang**, Parmit Chilana. Do It For Me vs. Do It With Me: Investigating User Perceptions of Different Levels of Automation in Copilots for Feature-Rich Software In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2025)*
- C.13 Yi-Hung Chou, Yiyang Min, **April Yi Wang**, James Jones. Learning from Mistakes: Understanding Ad-hoc Logs through Analyzing Accidental Commits In *Proceedings of the 21st International Conference on Mining Software Repositories (MSR 2025)*
- C.12 Qian Zhu, Dakuo Wang, Shuai Ma, **April Yi Wang**, Zixin Chen, Udayan Khurana, Xiaojuan Ma. Towards Feature Engineering with Human and AI's Knowledge: Understanding Data Science Practitioners' Perceptions in Human&AI-Assisted Feature Engineering Design In *Proceedings of the ACM Conference on Designing Interactive Systems (DIS 2024)*
- C.11 **April Yi Wang**, Andrew Head, Ashley Zhang, Steve Oney, and Christopher Brooks. Colaroid: A Literate Programming Approach for Authoring Explorable Multi-Stage Tutorials In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2023)* **Best Paper Honorable Mention**
- 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), Workshops (W), Companions (CP), and Showpieces (SP)

---

- W.11 Zeyu Xiong, Behnood Masoudi, Catherine Schmit, **April Yi Wang** From Workbook to Notebook: Collaborative Data Story Authoring with Spreadsheet. *15th annual workshop on the intersection of HCI and PL (PLATEAU 2025)*
- W.10 Shu Wang, **April Yi Wang** Merlin: A Markup Language for Algorithm Animations. *15th annual workshop on the intersection of HCI and PL (PLATEAU 2025)*

- SP.09 Lilian Lopez, Kiara Chau, Zeyu Xiong, **April Wang**. datAR: A Semi-Unplugged Approach to Teach Data Literacy Through Everyday Objects *Showpiece at the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2024)*
- W.08 Junling Wang, **April Yi Wang** CompetiLearn: A Retrieval-Augmented System for Complementing Learnersourcing and AI for Data Science Learners. *Workshop on Learnersourcing: Student-generated Content @ Scale, at ACM Learning @ Scale Conference (L@S 2024)*
- CP.07 Jesse Harden, **April Yi Wang**, Rebecca Faust, Katherine E Isaacs, Nurit Kirshenbaum, John Wenskovich, Jian Zhao, Chris North. Human-Notebook Interactions: The CHI of Computational Notebooks *In CHI Conference on Human Factors in Computing Systems (CHI 2024 Companion)*
- W.06 **April Y. Wang**, Zihan Wu, Christopher Brooks, Steve Oney. “Don’t Step on My Toes”: Resolving Editing Conflicts in Real-Time Collaboration in Computational Notebooks *The IDE Workshop at the IEEE/ACM International Conference on Software Engineering (ICSE 2024)*
- 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. 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.
- T.02 **April Yi Wang**. (2023). Interactive Programming Interfaces for Data Science Collaboration and Learning *Umich Ph.D. Thesis*, Ann Arbor, MI

## Invited Talks

2022-2023 *Designing Future Computational Notebooks for Collaboration and Learning*

**University of Virginia**, Charlottesville, VA

**Brown University**, Providence, RI

**ETH Zurich**, Zurich, Switzerland

**Northeastern University**, Boston, MA

**Washington University in St. Louis**, St. Louis, MO

**North Carolina State University**, Raleigh, NC

**University of Memphis**, Memphis, TN

**UIUC**, Virtual

**University of California Riverside**, Riverside, CA

**German Research Center for Artificial Intelligence (DFKI)**, Virtual

**University of Pennsylvania @ Guest Lecture, Live and Literate Programming**, Virtual

**Vanderbilt University @ Guest Lecture, Advanced Topics in SE**, Nashville, TN

**University of Waterloo @ Rising Stars Speaker Series**, Ontario, Canada

**University of Toronto @ Toronto Data Workshop**, Ontario, Canada

**University of Notre Dame @ HCI seminars**, Notre Dame, IN

**Syracuse University @ Syracuse HCI Summer Workshop**, Virtual

2020 *Redesigning Notebooks for Better Collaboration*

**JupyterCon 2020**, Virtual

## Service

Program Committee

---

2025 ACM Conference on Human Factors in Computing Systems (CHI)

2024 ACM Learning @ Scale Conference (L@S)

2024 ACM Conference on Human Factors in Computing Systems (CHI)

2023 International Conference on Learning Analytics And Knowledge (LAK)

2023 ACM Conference on Human Factors in Computing Systems (CHI), Late Breaking Work  
2022 Human Centered AI Workshop at NeurIPS (Neural Information Processing Systems) 2022  
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 – 2024 ACM Conference on Human Factors in Computing Systems (CHI) 🏆  
2019 – 2022 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 🏆  
2020 – 2022, 2024 ACM Symposium on User Interface Software and Technology (UIST)  
2021-2022 ACM Transactions on Computer-Human Interaction (TOCHI)  
2020 – 2022, 2024 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 – 2023 International Conference on Learning Analytics And Knowledge (LAK)  
2023 ACM Designing Interactive Systems (DIS)

### Operations Committee

---

2024 ACM SIGCHI Swiss Chapter board member  
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

### ETH Zürich

---

Spring 2024 Instructor – Advanced Topics in Mixed Reality  
Autumn 2024 Instructor – Human Computer Interaction  
Autumn 2024 Instructor – Seminar on User-Centered Programming Interfaces

### University of Michigan

---

Winter 2023 Graduate Student Instructor – SI 579 (Building Interactive Applications)  
Winter 2021 Graduate Student Instructor – SI 579 (Building Interactive Applications)

### Simon Fraser University

---

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.*

## Mentoring

### Doctorate Advisees

---

06/2024 – present **Xiaotian Su**  
ETH Zürich  
07/2024 – present **Junling Wang (ETH AI Center)**  
ETH Zürich (co-advised with Mrinmaya Sachan)



08/2024 – present **Zeyu Xiong**  
ETH Zürich

#### Thesis Advisees (M.S.)

---

04/2024 – 08/2024 **Jannik Gartmann**  
ETH Zürich Human-AI Collaboration to Support Creativity Work

04/2024 – 10/2024 **Catherine Schmit**  
ETH Zürich Developing A Data Diary Authoring Tool for Learning Data Literacy

04/2024 – 10/2024 **Shu Wang**  
ETH Zürich Lower the Barriers for visualising algorithm intuition

#### Thesis Advisees (Bachelor)

---

03/2024 – 08/2024 **Lilian Lopez**  
ETH Zürich Augmented Reality Mobile Interface for Introductory Data Science Courses

03/2024 – 08/2024 **Kiara Chau**  
ETH Zürich Understanding High-School Instructors' Challenges in Teaching Data Literacy

03/2024 – 09/2024 **Oliver Lehmann**  
ETH Zürich Live Peer Testing for ML Learners Focusing on Visual Data

02/2024 – 07/2024 **Pascal Linder**  
ETH Zürich A Collaborative Learning Extension for Jupyter Notebook

06/2024 – present **Yinuo Yang**  
University of Michigan

#### Other Mentees

---

**Dinara Talypova** (Summer 2024) PhD student at TU Wien  
**Matin Yarmand** (Summer 2024) PhD student at UCSD  
**Jiawen Zhu** (Summer 2024) Undergraduate student at UWaterloo  
*Next position: PhD student at UWashington*  
**Mamoun Chami** (Summer 2024) Masters student at ETH Zürich  
**Eliot Ullmo** (Summer 2024) Masters student at ETH Zürich  
**Rasan Younis** (Summer 2024) Masters student at ETH Zürich  
**Soroush Jahanzad** (Summer 2024) Masters student at ETH Zürich  
**Yang Wu** (Summer 2024) Masters student at Huazhong University of Science and Technology  
**Nan Li** (Summer 2024) Masters student at University of Zürich  
**Shuai Ma** (Winter 2023) PhD student at Hong Kong University of Science and Technology  
**Haoquan Zhou** (Fall 2022) Masters student at Umich  
*Next position: SDE at Alibaba Cloud*  
**Yuyu Yang** (Winter 2022) Undergraduate student at Umich  
**Steve Nguyen** (Winter 2022) Undergraduate student at Umich  
**Xuye Liu** (Summer 2020) Masters student at RPI  
*Next position: PhD student at UWaterloo*  
**Zihan Wu** (Summer 2019) Undergraduate student at Tsinghua University  
*Next position: PhD student at Umich*  
**Anant Mittal** (Winter 2019) Masters student at Umich  
*Next position: PhD student at U. Washington*  
**Jamie Neumann** (Winter 2019) Undergraduate student at Umich  
**Rebecca Parada** (Winter 2019) Undergraduate student at Umich  
**Natalie Gross** (Winter 2019) Undergraduate student at Umich  
**Ryan Mitts** (Summer 2017) Undergraduate student at SFU  
*Next position: SDE at Amazon*