

Kevin (Jiankai) Pu

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Research Interests

My research focuses on leveraging machine intelligence to build systems that align with human capabilities, facilitating **mixed-initiative and AI-proactive collaboration workflows** for complex, multi-turn tasks like automation, programming, and ideation.

Education

- 2023 – Present **University of Toronto**, Toronto, ON, Canada
Ph.D. in Computer Science
Advisors: Tovi Grossman, Yan Chen
- 2021 – 2023 **University of Toronto**, Toronto, ON, Canada
M.Sc. in Computer Science
Advisor: Tovi Grossman
- 2017 – 2021 **University of Michigan**, Ann Arbor, MI, USA
B.Sc. in Computer Science and Psychology
Advisor: Nikola Banovic

Publications

CONFERENCE PROCEEDINGS

- [P9] K. J. Kevin Feng, **Kevin Pu**, Matt Latzke, Tal August, Pao Siangliulue, Jonathan Bragg, Daniel S. Weld, Amy X. Zhang, Joseph Chee Chang. Cocoa: Co-Planning and Co-Execution with AI Agents. *ACM Conference on Human Factors in Computing Systems (CHI '26)*
Best Paper Award (Top 1%)
- [P8] **Kevin Pu**, Ting Zhang, Naveen Sendhilkathan, Sebastian Freitag, Raj Sodhi, Tanya Jonker. ProMemAssist: Exploring Timely Proactive Assistance Through Working Memory Modeling in Multi-Modal Wearable Devices. *ACM Symposium on User Interface Software and Technology (UIST '25)*.
- [P7] Sangho Suh, Michael Lai, **Kevin Pu**, Steven P. Dow, Tovi Grossman. StoryEnsemble: An AI-Powered Framework for Iterative Design and Creative Exploration. *ACM Symposium on User Interface Software and Technology (UIST '25)*.
- [P6] **Kevin Pu**, K. J. Kevin Feng, Tovi Grossman, Tom Hope, Bhavana Dalvi Mishra, Matt Latzke, Jonathan Bragg, Joseph Chee Chang, Pao Siangliulue. IdeaSynth: Iterative Research Idea Development Through Evolving and Composing Idea Facets with Literature-Grounded Feedback. *ACM Conference on Human Factors in Computing Systems (CHI '25)*.
- [P5] **Kevin Pu**, Daniel Lazaro, Ian Arawjo, Haijun Xia, Ziang Xiao, Tovi Grossman, Yan Chen. Assistance or Disruption? Exploring and Evaluating the Design and Trade-offs of Proactive AI Programming Support. *ACM Conference on Human Factors in Computing Systems (CHI '25)*.

- [P4] Xiaohang Tang, Sam Wong, **Kevin Pu**, Xi Chen, Yalong Yang, Yan Chen. VizGroup: An AI-Assisted Event-Driven System for Real-Time Collaborative Programming Learning Analytics. *ACM Symposium on User Interface Software and Technology (UIST '24)*.
- [P3] Suhyeon Yoo, **Kevin Pu**, Khai N. Truong. Behind the Popularity Curtain: Understanding the Motivations, Challenges, and Work Performed in Creating and Managing Pet Influencer Accounts. *ACM Conference on Human Factors in Computing Systems (CHI '24)*.
- [P2] **Kevin Pu**, Jim Yang, Angel Yuan, Minyi Ma, Rui Dong, Xinyu Wang, Yan Chen, Tovi Grossman. DiLogics: Creating Web Automation Programs with Diverse Logics. *ACM Symposium on User Interface Software and Technology (UIST '23)*.
- [P1] **Kevin Pu**, Rainey Fu, Rui Dong, Xinyu Wang, Yan Chen, Tovi Grossman. SemanticOn: Specifying Content-Based Semantic Conditions for Web Automation Programs. *ACM Symposium on User Interface Software and Technology (UIST '22)*.
Best Paper Honorable Mention (Top 10%)

WORKSHOP PAPERS

- [W1] Justin Cui, **Kevin Pu**, Tovi Grossman. LOOM: Personalized Learning Informed by Daily LLM Conversations Toward Long-Term Mastery via a Dynamic Learner Memory Graph. *AAAI '26 Workshop on Personalization in the Era of Large Foundation Models (PerFM)*.

Research Experience

- 06 – 08/2026 Student Researcher, **Google DeepMind**, New York, NY
Long-horizon AI Experiences
- 01 – 06/2026 Visiting Scholar, **UC Berkeley**, Berkeley, CA
Advisor: Bjoern Hartmann
- 10/2024 – 03/2025 Research Scientist Intern, **Meta Reality Labs**, Toronto, ON
Timely proactive AI assistance on multi-modal wearable devices
- 05 – 09/2024 Research Intern, **Semantic Scholar, Allen Institute for AI**, Seattle, WA
Interactive interfaces for human–AI collaborative research ideation
- 09 2021 – Present PhD Researcher, **Spatial Interaction Group, DGP, University of Toronto**, Toronto, ON
- 01 2020 – 05 2021 Undergraduate Research Assistant, **Computational HCI Lab, University of Michigan**, Ann Arbor, MI

Awards

- 2026 CHI Best Paper Award (Top 1%) [P9]
- 2024, 2026 **Wolfond Scholarship** in Wireless Information Technology (\$5,000/yr)
- 2023 **Department of Computer Science Graduate Program Award** (\$2,000)
- 2022 UIST Best Paper Honorable Mention (Top 10%) [P1]
- 2019 **EECS Scholar Award**, University of Michigan (GPA > 3.9)

Invited Talks

- 03/2026 **Designing Mixed-Initiative Context Specification and Understanding in Human–AI Collaboration**
UC Berkeley, Host: Bjoern Hartmann
- 12/2025 **Designing Mixed-Initiative Collaboration with Increasingly Autonomous AI**
HKUST (GZ) (virtual), Host: Xin Tong
- 09/2025 **Designing Mixed-Initiative Collaboration with Increasingly Autonomous AI**
KAIST, Host: Juho Kim
- 08/2025 **Designing Mixed-Initiative Collaboration with Increasingly Autonomous AI**
AXL, Host: Tovi Grossman
- 05/2025 **From Specification to Collaboration: Designing Human–AI Systems that Evolve with User Intent**
HKUST, Host: Linping Yuan

Academic Service

Reviewing:

CHI 2023, 2024*, 2025, 2026[†]; UIST 2024, 2025[†]; CSCW 2023–2024; IMWUT 2026; TiiS 2024.

* *outstanding review(s)*.

Student Volunteer: UIST 2023, 2024.

Teaching

- 01 – 05/2024 TA, CSC 309: Programming on the Web
- 09 – 12/2023 TA, CSC 318: The Design of Interactive Computational Media
- 09/2022 – 01/2023 TA, CSC 207: Software Design
- 09/2021 – 05/2022 TA, CSC 108: Introduction to Computer Programming

Mentoring

- 09/2025 – Present Justin Cui, University of Toronto
- 05 – 09/2023 Daniel Lazaro, University of Toronto
- 01 – 05/2023 Minyi Ma, University of Toronto
- 05 – 09/2022 Jim Yang, University of Toronto
- 05 – 09/2022 Angel Yuan, University of Toronto
- 01 – 05/2022 Rainey Fu, University of Toronto

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