TRICIA NGOON, PH.D

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PROFESSIONAL SUMMARY

Human-computer interaction researcher with 12 years of experience leading collaborative research initiatives in educational technology, AI, and creativity support. Specialized in mixed-methods research to improve digital learning tools and experiences, with a focus on improving equity and access. Led high-impact research for 11 digital products, distilling actionable insights to directly inform design and development. Recognized with 10 peer-reviewed publications and top-tier human-computer interaction venues, including 3 award-winning publications.

EXPERIENCE

Research Scientist   Jan 2024 – Nov 2024
TeachFX, Inc.   *Remote, USA*
TeachFX, Inc. is a Series A educational technology startup with over 5,000 teacher users nationwide aimed at improving equitable education through automated feedback.

- Led 50+ qualitative interviews with K-12 teachers and instructional leaders, collaborating with product and engineering teams to influence key product decisions for a successful product rebrand.
- Managed recruitment and project logistics for a large-scale user research evaluation with 200+ anticipated teachers, ensuring efficient data collection and management.
- Developed a comprehensive qualitative research guide to elevate high-quality user research practices for the organization.

Postdoctoral Research Scientist   Jun 2021 – Mar 2024
Carnegie Mellon University, HCI Institute   *Pittsburgh, PA*
The HCI Institute at Carnegie Mellon University is a internationally-renowned center for rigorous HCI, design, and UX research.

- Led cross-functional design and research initiatives across design, engineering, and research teams for 3 digital products to improve teaching, impacting over 400 teacher users.
- Conducted comprehensive, end-to-end primary research, including in-depth user interviews, co-design workshops, and surveys with over 50 teachers, college instructors, and students. These efforts resulted in 2 peer-reviewed publications and an Honorable Mention publication award.
- Synthesized and communicated key research findings and strategy, securing a $300,000 grant from the National Science Foundation for continued development of educational technologies and research.

Mixed-Methods Ph.D Researcher   Jun 2015 – Jun 2021
UC San Diego, Design Lab   *La Jolla, CA*
The Design Lab at UC San Diego is an interdisciplinary design institution dedicated to high-quality research and human-centered design education.

- Designed and deployed 4 interactive educational tools to support novice learners in creative fields, serving 300+ lusers and improving user engagement and creative learning outcomes.
- Utilized a mix of quantitative and qualitative research methods including A/B testing, user interviews, and surveys to gather actionable insights. Contributed to the development of data-driven educational products, resulting in 3 peer-reviewed publications and 2 Honorable Mention awards.
- Defined research questions and scoped projects to address complex, ambiguous challenges in educational technology, leading to the successful completion of a doctoral dissertation.

Research Science Intern   Jun 2019 – Sept 2019, Jun 2020 – Sept 2020
Adobe Research   *San Francisco, CA*
Adobe Research delivers cutting-edge computer science and HCI research to impact Adobe's innovative products.

- Coordinated interviews, focus groups, think-aloud sessions, and A/B testing to develop 2 novel prototypes for improving collaboration and drawing with over 50 users.
- Effectively managed and prioritized a 10-week research plan for prototype design, study design, and evaluation, resulting in a peer-reviewed publication.
- Demonstrated creative and insightful communication and public speaking skills by communicating findings to varied audiences in 2 seminar talks.

UX Research Intern Jun 2016 – Sept 2016

NASA Jet Propulsion Laboratory *La Cañada Flintridge, CA*

JPL is a research and development leader in robotic space exploration.

- Led in-depth storyboarding, persona testing, and user interviews with 6 engineers across 2 cross-functional teams to improve internal tools and refining product features to enhance collaboration.
- Designed and documented a new prototype for performance monitoring tools using user-centered design, resulting in widespread adoption across 3 engineering teams.
- Invited to present on integrating human-centered design and systems engineering at a major systems engineering conference, showcasing the value of combining design thinking with technical development to create more effective, user-driven solutions.

SELECTED PROJECTS

TeachFX Teaching Focus Areas. Engaged with over 30 K12 teachers through interviews and focus groups to ask about their experiences using AI technology and how they use data to reflect on teaching. The results from these interviews led to key design decisions for TeachFX's new product direction of providing goal-setting and focus areas for teachers.

ClassInSight. Conducted co-design sessions and interviews with high school teachers teachers to design a web application that visualizes teachers' classroom discussion for their reflection and professional development. 22 teachers have used ClassInSight over 3 academic years. This work was published in a top-tier HCI conference.

Smart Technologies in the Classroom. Interviewed over 50 teachers, faculty, and students about their perceptions around technologies that collect data to provide feedback to professionals. Developed novel interfaces and models for detecting teacher and student behaviors in the classroom. This work was published in 3 top-tier learning science and HCI venues, with one publication earning an Honorable Mention (top 5%) paper award.

CritiqueKit. Collaborated with Adobe Research to design a tool to help novices provide specific, actionable, and justified feedback, used by over 200 students and teaching assistants in undergraduate design courses. This work received an Honorable Mention (top 5%) paper award.

Shöwn. Collaborated with Adobe Research to design a Wizard-of-Oz tool to provide in-context examples to help novice comic artists. This work has influenced AI products within Adobe Creative Suite and was published in a top-tier HCI conference.

EDUCATION

Ph.D in Cognitive Science, University of California, San Diego June 2021

B.A. in Psychology with Honors, University of California, Berkeley May 2013

SKILLS

Research Skills: Data analysis, Experimental design, A/B testing, Usability testing, Persona development, Focus groups, Heuristic evaluation, Interviews, Survey design, Co-design workshops

Tools: RStudio, Google Looker Studio, Maze, Qualtrics, Figma, Microsoft Office Suite, Notion, HTML/CSS, JavaScript

Other: Writing, Public speaking, Project management, Presentation design