
EDUCATION

Stanford University

Sep 2024 – June 2026

Education Data Science (MS)

Stanford, CA

- Cumulative GPA: 4.11/4.0
- Relevant Courses: Data Processing & Analysis; Understanding Users (UXR); Human-Centered LLMs; Conversational Virtual Assistants; Experimental Design; NLP with Deep Learning; Applied Machine Learning; Data Science and the Science of Learning; Classroom Assessment; Curriculum Construction; Advanced Regression Analysis
- Extracurricular: Stanford XR, Design Kids, Code in Place

University of Cambridge

Oct 2021 – June 2024

Education, Policy, and International Development (BA Hons)

Cambridge, UK

- Grade: Double First Class Honours with Distinction (Foundation Prize, Horibin Prize, George Peabody Scholarship)
- Dissertation: GenAI pedagogical innovation through multistakeholder design-based implementation research
- Extracurricular: Cambridge University VR/AR Society (president), Cambridge Digital Transformation (policy researcher)

EXPERIENCE

ReelFluent

March 2026 – Present

Learning Engineer

Remote, US

- Engineering a full-stack AI scriptwriting studio for language-learning platform (Python/FastAPI, React/TypeScript) with a **multi-agent LLM pipeline** spanning world-building, character generation, storyline drafting, and screenplay editing.

Stanford Lytics Lab

Oct 2025 – Present

Learning Analytics Researcher (advised by Dr. Candice Thille)

Stanford, CA

- Led end-to-end development and launch of a teacher-AI collaborative feedback platform (React, FastAPI, Firebase), shipping to university course staff **within 2 weeks from conception to production** and **iterating live with users**. Defined a human-AI collaboration framework and success metrics grounded in learning science for pedagogical alignment.
- Owned and implemented analytics strategy for product development, architecting **event logging infrastructure**, designing and executing **A/B experiments**, and synthesizing **quantitative behavioral data with qualitative user interviews** to deliver feature improvements that increased **feedback provision efficiency by 60%**. [[demo link](#)]

Goodnotes

June 2025 – Sep 2025

Researcher in Residence, Product & Industry: AI & Goodnotes Education

Hong Kong

- Led cross-functional product discovery through user research interviews with teachers and marketing stakeholders to identify AI integration pain points and **high-value user workflows** to inform Goodnotes Education product strategy; collaborated with design to translate research into **feature requirements** for AI-driven collaborative tools.
- Designed and deployed a **multi-stage LLM data processing pipeline** to transform curriculum data into structured, model-ready inputs powering AI-driven product features.
- Lead-authored **70+ page research report** on emerging practices for responsible GenAI integration in K-12 education, involving **interviews with 15+ educators and learners**. Research launched at UK Parliament (House of Lords).

TeachFX

Jan 2025 – June 2025

NLP Research Intern

Menlo Park, CA

- Conducted ablation study to systematically optimize prompt engineering for LLM performance on automated feedback to support teachers, achieving **F1=0.864 in zero-shot classification** of classroom discourse patterns.
- Devised **effective data annotation methodologies** to support product deployment and expand ML detection capabilities across HQIM instructional routine for math, translating research findings into actionable product improvements.

Learnest AI

June 2023 – Present

Co-Founder, Product & Community

Stanford, CA

- Co-founded the non-profit dedicated to promoting ethical AI in Education (AIED) via cross-disciplinary R&D on AIED frameworks, products, and policy; helped **raise \$11k** for the funded research fellowship program.
- Designed and delivered the **Maven course** “[Responsible AI Bootcamp for EdTech Practitioners](#)”, instructing 20+ educators, product designers, and researchers to apply industry-aligned frameworks and LLM guardrails to build trustworthy AI edtech products using Dify and Google AI Studio (**course ratings: 4.9/5**).
- Led end-to-end design and development of the Learnest website; executed product-led growth strategy, achieving **top-ranking SEO results** on Google for the keywords “fellowship,” “ethics,” “education,” and “AI.”

Stanford Code in Place

Nov 2024 – June 2025

UX Research and Growth Strategy

Stanford, CA

- Led **internationalization (i18n) UX research** via alumni focus groups to identify localized barriers to platform adoption and inform global product strategy.
- Launched and scaled the **Global Ambassador program** managing 20 international representatives to establish a continuous user feedback loop, contributing to **60% YoY increase in global application growth**.

SKILLS & COMPETENCIES

- **Strategy & Leadership:** product discovery, stakeholder management, growth strategy, cross-functional collaboration
- **User & Product Research:** user interviews, A/B testing, usability testing, focus groups, affinity mapping, participatory action research, social media analysis, diary studies, think-aloud, surveys, UI/UX design
- **Data Science & AI:** statistical modeling, machine learning, data processing and analysis, data visualization, prompt engineering and evaluation, RAG systems, LLM workflow, agents, Python, R, JavaScript, SQL
- **Tools & Platforms:** Notion, Figma, UserTesting, Claude Code / Cursor (rapid prototyping), Firebase, Dify, Webflow

OTHER PROJECTS

TeachWise: AI Teaching Practice Platform MentorMates Hackathon

Jul 2025

Hong Kong, China

- Spearheaded product vision and rapid prototyping of an AI-powered teaching practice platform using Google Gemini LLM and FastAPI in 24 hours, won hackathon **Overall Grand Prize** for innovation and product impact.
- Designed simulated “virtual students” that model learner cognition and personalize teacher feedback, scaffolding teachers to effectively identify misconceptions and leverage appropriate instructional strategies. [[demo link](#)]

RESEARCH & SELECTED COURSEWORK

Publications

- Liu, X. & Myoung, E. (2026). *Measuring Math or Mouse Skills? Behavioral Dimensions and Multiple Pathways to Test-Taking Efficiency in Computer-Based Testing*. Accepted for the Proceedings of the 18th International Conference on Educational Data Mining (EDM 2026).
- Sharma, M. & Liu, X. (2026). *CantoTalk: Probing Teacher Expertise from Fine-Tuned Talk Move Representations*. Accepted for the Proceedings of the 18th International Conference on Educational Data Mining (EDM 2026).
- Liu, X., Lin, J., & Emmerson, D. (2025). *The AI Shift in Schools: Risks, Realities, and What's Coming Next*. Goodnotes. <https://www.goodnotes.com/research/ai-shift-in-schools-risks-realities-whats-coming-next-report>
- Borchers, C., Liu, X., Lee, H.H., Zhang, J. (2024). *Ethical AIED and AIED Ethics: Toward Synergy Between AIED Research and Ethical Frameworks*. In: Olney, A.M., Chounta, I.A., Liu, Z., Santos, O.C., Bittencourt, I.I. (eds) Artificial Intelligence in Education. Posters and Late Breaking Results, Workshops and Tutorials, Industry and Innovation Tracks, Practitioners, Doctoral Consortium and Blue Sky. AIED 2024. Communications in Computer and Information Science, vol 2150. Springer, Cham. https://doi.org/10.1007/978-3-031-64315-6_2
- Liu, X. (2024). Transcending the Hype: A Comparative Public Media Analysis of the Educational Discourses on MOOCs and ChatGPT. *Digital Culture & Education*, 15(1), 22–53. <https://www.digitalcultureandeducation.com/volume-151-papers/liu-2024>
- Liu, X., Mace, R., & Emmerson, D. (2024). *Social and Emotional Impact of Generative AI in Schools*. Goodnotes. <https://www.goodnotes.com/research/social-emotional-impact-generative-ai-schools>

Conference Presentations

- Liu, X., & Shi, X. (November, 2025). *Identifying Critical Prompt Elements for Zero-Shot Detection of Notice and Wonder Routines: An Ablation Study of Large Language Model Biases in Classroom Discourse Analysis*. **Accepted** for presentation at the AI in Education Summit, Khan Lab School, Mountain View, CA, USA.
- Myoung, E. & Liu, X. (2025, April). *Semiotic Complexity in Computer-Administered Tests: Examining Item Design in Major Testing Programs*. Presented at the 2025 National Council on Measurement in Education (NCME) Annual Meeting, Denver, CO, USA.

Data Science Coursework

- Liu, X. & Sharma, M. (December, 2025). *ClaimCLAIRE: A Holistic Multi-Component Fact-Checking Agent for Open-World Claims*. Stanford CS 224V: Conversational Virtual Assistants with Deep Learning.
- Liu, X. (June, 2025). *Engagement Patterns and Quiz Performance in Online Statistics Learning: A Multilevel Analysis*. Stanford DATASCI 294L: Data Science and the Science of Learning.
- Fukuhara, K., Liu, X. & Shi, X. (March, 2025). *Retention in Gamified Learning: Analyzing Duolingo User Engagement with Machine Learning*. Stanford CS 129: Applied Machine Learning.
- An, A. & Liu, X. (December, 2024). *Prediction and Inference on Math Assignment Outcomes: Statistical Analysis of Student Success on ASSISTments Platform*. Stanford MS&E 226: Fundamentals of Data Science (Prediction, Inference, Causality)