LOIS S. WONG

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STATEMENT OF PURPOSE

In my work, I aim to make AI accessible to people from all backgrounds, including individuals with limited or interrupted formal education. I am developing an open personalized, inclusive, and modular AI education platform to support this mission.

EDUCATION

Johns Hopkins University *Aug 2023 – Dec 2024*
Master of Science in Engineering in Computer Science
GPA: 3.75; Awards and Honors: Rubenstein Fellowship
Master Thesis: GAITA: a RAG System for Personalized Computer Science Education
Advisors: David Yarowsky

University of California, Berkeley
Professional Certificate in Machine Learning and Artificial Intelligence *Mar – Sep 2022*
Bachelor of Arts in Linguistics, Minor in English *Jan 2020 – Dec 2021*
GPA: 3.90; Honors and Societies: Phi Beta Kappa, Distinction in General Scholarship

West Valley College *Aug 2016 – Jun 2019*
Associate of Science in Administration of Justice
GPA: 3.89; began coursework at age 15 following a homeschool education

TEACHING & SPEAKING

What AI Can and Cannot Do | Student Workshop, Feb 17, 2026

Pulling the Wool Over AI | Guest Lecture in UChicago's HUMA 10001 Undergraduate Research: What, Why, and How, Feb 10, 2026

Using AI in Research and Writing | Student Workshop at UChicago's Center for Digital Scholarship, Feb 5, 2026

Pulling the Wool Over AI | Workshop at UChicago's Center for Digital Scholarship, Nov 18, 2025

Responsible AI Use in Humanities Research | Guest Lecture in UChicago's GNSE Thesis Seminar, Oct 24, 2025

GAITA: A Rag System for Personalized Computer Science Education | Research Talk at Apple, Sep 18, 2024

PROFESSIONAL EXPERIENCE

University of Chicago, Center for Digital Scholarship *Sep 2025 – Present*
AI Librarian
- Teaching workshops and guest lectures on Introductory AI and Ethical/Responsible usage in research and learning
- Developing risk evaluation frameworks for evaluating internal AI projects and external vendor proposals to ensure responsible AI integration
- Providing research consultations to faculty and students
- Developing internal AI education resources for staff (Canvas course, resource guides, monthly newsletter)
- PM for the library's strategic priority #11

Novita AI *June 2025 – Present*
Founding Developer Relations Engineer
- Established scalable systems for email campaigns, automations, and CRM use to drive top-of-funnel growth
- Built developer relations and content strategy, including user onboarding flow, product education, and user-facing resources for AI infrastructure products (nurture leads)
- Created documentation, blog posts, and marketing/educational materials that helped developers understand and integrate Novita's tools into their workflows
- Represent Novita through event presence (presenting hackathon awards, tabling at AI events)

AIML.com *Jan 2025 – May 2025*

Machine Learning Content Writer

- Write SEO-optimized articles and interactive case studies to explain complex ML and AI concepts for technical and non-technical audiences (published on AIML.com)
- Collaborate with editors to refine content, ensuring clarity, technical accuracy, and accessibility

Johns Hopkins Center for Digital Health and AI *Jan 2025 – Mar 2025*

Technical Lead

- Lead development of a RAG chatbot enabling interactive engagement with AIM-AHEAD's Data Science coursework
- Write technical design documentation to outline rationale and implementation details for stakeholders
- Present project updates and outcomes to stakeholders

Apple *Aug 2023 – Sep 2024*

AI Education Teaching Assistant (AIML org)

- Collaborated with Industry Experts Educators to develop and produce a series of internal NLP and ML courses
- Designed and implemented hands-on coding exercises using Jupyter notebooks to provide practical experience
- Established and adhered to style guides to maintain consistency in course materials
- Delivered a research talk on Retrieval-Augmented Generation (RAG) and its educational applications

International Rescue Committee *June 2024 – Aug 2024*

Data Analytics and Systems Intern

- Designed and implemented a SharePoint-based Knowledge Management System with an integrated RAG chatbot to streamline information access and enhance operational efficiency
- Conducted user research to identify user needs, optimizing data retrieval workflows for refugee aid programs

Grade Potential Tutoring *Feb – Aug 2023*

Academic Tutor

- Created customized learning tactics and strategies for K-12 students to enhance their proficiency in English and Math
- Motivated and supported struggling students to regain confidence and achieve significant grade improvements
- Edited and proofread students' papers, offering corrections and suggestions to enhance grammar, clarity, and flow

SELECTED TECHNICAL PROJECTS

GAITA: Personalized Pathways for Learning Computer Science *Apr 2024 – Present*

- Developed and deployed GAITA, a GPT-4o-mini RAG chatbot that creates personalized CS learning pathways tailored to users' background and goals
-Built a web crawler & scraper to compile a vector-enhanced database of 1,200+ open-access CS courses
- Created prompt templates and system architecture for reliability and accuracy
- Implemented a semantic retrieval pipeline for course recommendations
- Built learning pathways through iterative prompting
- Selected for the Backdrop Build pre-accelerator and presented at a Research Talk at Apple

Deep Learning Course Development for Apple Engineers *Mar 2024 – Present*

- Designed and implemented hands-on coding exercises using Jupyter notebooks to reinforce technical concepts
- Received positive feedback from pilot participants, highlighting the course's relevance and effectiveness
- Established and adhered to style guides to maintain consistency in course materials, ensuring alignment with Apple's internal education standards

Mitigating Social Bias in Language Models Through Adversarial Debate *Apr – May 2024*

- Designed and implemented an experimental framework using GPT-3.5 turbo to explore and measure biases by promoting debates on stereotypes
- Analyzed the effectiveness of debate interventions on pre- and post- debate model outputs
- Implemented a standardized question framework to measure shifts in model viewpoints and assess bias reduction
- Developed metrics and reports to gain insights into bias mitigation

Suicide Ideation Detection *Jul – Sep 2022*

- Preprocessed over 20,000 Reddit posts using NLP techniques to prepare data for classification
- Trained text classification models achieving 92% accuracy and 96% recall in detecting suicide ideation
- Utlised ELI5 and LIME for global and local model interpretability, validated feature importances using KL-Divergence

scores, and developed a vocabulary of predictive terms
- Received recognition from professors and was selected as an exemplar project for future cohorts

Humor Detection *Sep 2022*
- Won 2nd Place at Intel® AI for Social Good Hackathon (NLP Track), achieving an F-1 score of 97%
- Trained a Huggingface distilBERT model to detect humor using the Habana® Gaudi® Deep Learning Accelerator

Research Study Replication *Dec 2021*
- Replicated "Expressive Intent, Ambiguity, and Aesthetic Experiences of Music and Poetry" using raw data in R
- Applied Linear Mixed Effects models to investigate how knowledge of authorial intent impacts aesthetic experience
- Conducted statistical analyses (ANOVA, t-tests, F-tests) to evaluate the results and address the research question

RESEARCH EXPERIENCE

University of Michigan *Sep 2022 – Mar 2023*
NLP Research Intern
- Analyzed and synthesized cutting-edge NLP research, transforming key concepts into a structured knowledge graph
- Added over 180 contributions to the collaborative research platform, regularly presenting updates and key findings
- Contributed to a survey paper on the computational semantic analysis of metaphor

San Jose State University *Mar – Aug 2022*
Research Assistant to Professor Jonathan Rawski–Computational Phonology
- Analyzed computational analyses in linguistics, focusing on Automata, Grammars, and Formal Language Theory
- Investigated the impact of various formal grammars on encoding phonological structures and processes

PAPERS

Wong, L. (2024). Gaita: A RAG System for Personalized Computer Science Education. https://doi.org/10.35542/osf.io/97nmg

Wong, Lois Sun, Ehong. (2024). Balancing Personalization, Privacy, and Ethical Challenges in Recommender Systems. 10.13140/RG.2.2.26142.40007.

Wong, L., Ferber, A. (2024, July 11). Advancing Personalized Computer Science Education: An Information Retrieval Perspective. https://doi.org/10.35542/osf.io/sndum

Wong, L. (2023). On the Use of Metaphor Translation in Psychiatry. *arXiv preprint arXiv:2312.14845*.

SELECTED LINGUISTICS RESEARCH PROJECTS

Semantic Comparison of French and English Definite Articles
- Applied Lambda Calculus to model implication, presupposition, and degrees of specificity across French and English
- Collected and annotated spoken data in both languages, adhering to rigorous linguistic standards
- Applied interlinear glossing to demarcate syntactic categories and modelled syntactic structure with trees
- Addressed natural language ambiguity by converting text data into First Order Logic

Syntactic Analysis of Seenku
- Proposed an X-Bar analysis of Seenku by reviewing 150+ documents of corpus data
- Derived a phrase structure grammar from observed syntactic patterns, and modelled syntactic structure with trees
- Developed recursive generative rules to analyze question formation, antipassivation, and DP movement

Phonological and Typological Analysis of Seenku
- Compiled data from a grammar to analyse Seenku's phonological processes of palatalization and affrication
- Established phonological rules to describe the transformations involved in these processes
- Summarized Seenku's phoneme inventory, syllable structure, morphology, and tone systems, situating the language within a typological perspective

Phonetic Analysis of Mandarin
- Collected and phonetically transcribed 120+ instances of spoken Mandarin data using IPA
- Annotated spectrograms with Praat to illustrate phonetic segmentation and demarcate tonal and vowel alternation
- Measured the effects of bilingualism on pronunciation, comparing meaningful differences in Mandarin and Cantonese
- Validated findings through interviews with native speakers, ensuring accuracy and relevancy of the phonetic analysis

AWARDS AND HONORS

Rubenstein Fellowship – Johns Hopkins University, 2023

2nd Place – Intel® AI for Social Good Hackathon, NLP Track, 2022

Distinction in General Scholarship – UC Berkeley, 2021

Phi Beta Kappa – UC Berkeley, 2021

Berkeley Transfer Scholarship – UC Berkeley, 2020

Distinction – Associate of Trinity College London (ATCL) in Violin Performance Diploma, 2018