WEIRUI PENG

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EDUCATION

Columbia University — Sep 2022 - Dec 2023
MSc in Electrical Engineering

· Advisor: Dr. Lydia Chilton

The Chinese University of Hong Kong — Sep 2018 - Jun 2022
BEng in Electronic Engineering with First Class Honor

· Advisor: Dr. Thierry Blu

PUBLICATION

1. Qianou Ma, **Weirui Peng**, Hua Shen, Kenneth Koedinger, and Tongshuang Wu. 2024. [What You Say = What You Want? Teaching Humans to Articulate Requirements for LLMs.](#) *In submission for ACM CHI 2025.*

2. Zheng Zhang, **Weirui Peng**, Xinyue Chen, Luke Cao, Toby Jia-Jun Li. 2024. [LADICA: A Large Shared Display Interface for Cognitive Assistance in Co-Located Team Collaboration.](#) *In submission for ACM CHI 2025.*

3. Kyrie Zhixuan Zhou, **Weirui Peng**, Yuhan Liu, Rachel F. Adler. 2024. [Exploring the Diversity of Music Experiences for Deaf and Hard of Hearing People.](#) *Accepted to CSCW 2024.*

4. **Weirui Peng**, Mengyi Wei, and Kyrie Zhixuan Zhou. 2023. [Enhancing User Engagement in AI Auditing Through Gamification and Storytelling.](#) *In CSCW Workshop on Supporting User Engagement in Testing, Auditing, and Contesting AI.*

RESEARCH EXPERIENCE

Research Assistant, WiNE Lab — Apr 2024 - Present
Advised by Prof. Sherry Tongshuang Wu — *Carnegie Mellon University*

· Designed and implemented a web-based interactive system that transforms user requirements into effective prompts for large language models (LLMs).
· Conducted in-depth data analysis of user study results to evaluate system usability and effectiveness, deriving key findings for further development.
· Paper submitted to ACM CHI 2025

Research Assistant, CMU HCI Institute — Apr 2024 - Sep 2024
Advised by Prof. Niki Kittur & Prof. Nik Martelaro — *Carnegie Mellon University*

· Investigated how designers utilize bio-inspiration to improve design outcomes, focusing on the methods and processes employed in translating natural phenomena into innovative solutions.
· Developed workshop agendas and organized sessions to explore how designers identify and extract key elements from bio-inspiration, facilitating deeper insights into their creative processes.

Reseach Assistant, SaNDwich Lab — Jan 2024 - Present
Advised by Prof. Toby Jia-jun Li — *University of Notre Dame*

· Conducted interviews with users to understand their unique needs in team planning tools.
· Designed an interactive system for supporting co-located team collaborations by helping members perform cognitive tasks such as brainstorming, organizing ideas, and making comparisons.
· Paper submitted to ACM CHI 2025

Reseach Assistant, Information Experience and Accessibility Lab — Sep 2023 - Jan 2024
Advised by Prof. Rachel F. Adler — *University of Illinois Urbana-Champaign*

- Conducted qualitative content analysis and text mining on Reddit discussions about music experiences of Deaf and Hard-of-hearing (DHH) people.
- Conducted interviews with DHH people to understand their needs in music appreciation.
- Paper accepted to CSCW 2024.

Reseach Assistant, Computational Design Lab   Jun 2023 - Dec 2023
Advised by Prof. Lydia Chilton   *Columbia University*

- Created an AI-powered interactive system to assist design students in crafting digital art portfolios with p5.js.
- Utilized generative AI to co-create visual, audio, and interactive elements based on artists' visions.

PROFESSIONAL EXPERIENCE

Oortech   Jun 2023 - Oct 2023
Machine Learning Research Intern   *New York, USA*

- Conducted a detailed comparative analysis of large language models (LLM) including GPT3.5, Vicuna, Bloom, Llama2, Phoenix, and ChatGLM, using the Fastchat platform.
- Implemented the LoRA finetuning method to build and refine a specialized LLM product tailored for Lenovo, incorporating the company's product knowledge through custom datasets constructed from the information provided by Lenovo.
- Addressed and resolved technical challenges in model training and integration, significantly enhancing the service's ability to provide accurate and effective responses to customer queries.

AWARDS & HONORS

- Talent Development Scholarship, Hong Kong, 2022
- Second Runner Up & Xiaomi Vela- Smart City IoT Award, HackUST, 2021
- Bronze Medal at National Level, 7th International Internet+ College Students' Innovation & Entrepreneurship Competition, 2021

SKILLS

- **Programming Languages:** Python, JavaScript, LaTex, MATLAB, HTML, CSS, SQL
- **Tools and Frameworks:** Flask, MySQL, MongoDB, GCP, GitHub, GitHub Actions, Tensorflow, PyTorch
- **Languages:** Mandarin (native), Cantonese (native), English (fluent)