LI-CHUN (PHOEBE) LU

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EDUCATION

Electrical Engineering, National Taiwan University (NTU) **Taipei, Taiwan**

Bachelor of Science in Engineering *Sep. 2020 - Jun. 2025 (Expected)*

- Related Courses: Intro. to Computer Science, Algorithms, Computer Architecture, Computer Programming, Itro. to GenAI.
- Last-60-credit GPA: 4.16/4.3.

Electrical and Computer Engineering, San Diego State University **California, United States**

Exchange Student *Jan. - May 2023*

- Selected Courses: Operating Systems, Data Structure, Intro. to AI, Oral Communication.
- Overall GPA: 3.93/4.0

RESEARCH INTERESTS

My interest lies in human-centered natural language processing (NLP), which is at the intersection of human-computer interaction and ML/NLP that aims to integrate AI to enhance human experiences and capabilities.

PAPERS

- **Li-Chun Lu***, Shou-Jen Chen*, Tsung-Min Pai, Chan-Hung Yu, Hung-yi Lee, Shao-Hua Sun, "LLM Discussion: Enhancing the Creativity of Large Language Models via Discussion Framework and Role-Play," in *Proceedings of The Conference On Language Modeling (COLM)*, 2024.
- Yu Lun Hsu, Chien-Ting Lu, **Li-Chun Lu**, Chih-Heng Tam, Yu-Chieh Sun, Ting-Kang Wang, "AnimalSense: Understanding Beyond-human Sensory Capabilities of Animals via VR Games," in *Student Game Competition (SGC) of the Conference on Human Factors in Computing Systems (CHI)*, 2024. (Runner-Up Award.)
- Pin-Chun Lu, Che-Wei Wang, Yu Lun Hsu, Alvaro Lopez, Ching-Yi Tsai, Chiao-Ju Chang, Wei Tian Mireille Tan, **Li-Chun Lu**, Mike Y Chen, "VeeR: Exploring the Feasibility of Deliberately Designing VR Motion that Diverges from Mundane, Everyday Physical Motion to Create More Entertaining VR Experiences," in *Proceeding of the Conference on Human Factors in Computing Systems (CHI)*, 2024.
- Chien-yu Huang et al., "Dynamic-SUPERB Phase-2: A Collaboratively Expanding Benchmark for Measuring the Capabilities of Spoken Language Models with 180 Tasks," under review in *International Conference on Learning Representations (ICLR)*, 2025.

RESEARCH EXPERIENCE

Peng's Language Understanding Synthesis Lab (PLUS), University of California, Los Angeles **California, United States**

Visiting Undergraduate Researcher | Advisor: Prof. Nanyun (Violet) Peng *Nov. 2024 – Apr. 2025 (Expected)*

- Collect and analyze both human expert data and machine-generated data across various dimensions, including literature and creative problem solving, to identify gaps in existing creativity evaluation metrics.
- Develop a reward model for robust creativity evaluation to reflect creativity that align with human judgments across diverse contexts.

Robot Learning Lab (RLL), NTU **Taipei, Taiwan**

Research Assistant, Undergraduate Researcher | Advisor: Prof. Shao-Hua Sun *Oct. 2023 – Present*

- Developed a three-phase discussion framework incorporating role-playing techniques for LLM agents, resulting in a 20% increase in their creative performance on 4 benchmarks, including the Wallach-Kogan Creativity Tests and the scientific creativity.
- Devised an LLM evaluation based on 4 metrics of creativity and designed questionnaires to collect more than 1,400 human responses on creativity across these metrics, demonstrating a 0.7 correlation between LLM evaluations and human evaluations.

- Enhanced the continuous learning capabilities of LMs by designing a decision agent that integrates an RAG-based in-context learning system with model update mechanisms.
- Presented our work *LLM Discussion* at the Conference on Language Modeling (COLM) poster session with over 900 attendees.

Deep Learning & Human Language Processing Lab (DLHLP), NTU **Taipei, Taiwan**

Undergraduate Researcher | Advisor: Prof. Hung-yi Lee *Jul. 2023 – Present*

- Proposed and processed a dataset, "Third Tone Sandhi Recognition in Mandarin," for Dynamic-SUPERB to evaluate universal speech models, based on the NCCU Corpus of Spoken Taiwan Mandarin dataset.
- Applied the Direct Preference Optimization (DPO) framework in reinforcement learning to train a text-instruction-guided voice conversion model, collaborating with two teammates to enhance its performance.

Human Computer Interaction Lab (HCI), NTU **Taipei, Taiwan**

Undergraduate Researcher | Advisor: Prof. Mike Y. Chen *Aug. 2023 – Feb. 2024*

- Demonstrated and presented our game at the Student Game Competition (SGC). Implemented three levels of sensation substitution and remapping in a virtual reality game using Unity to enhance human comprehension of animal senses.
- Surveyed prior works, collected, and analyzed Mass Rapid Transit speed data to justify the validation of paper hypotheses and questionnaire design. Designed figures and edited a demo video to visualize paper information using Adobe tools.

TEACHING EXPERIENCE

Inro. to Generative Artificial Intelligence Course, NTU **Taipei, Taiwan**

Teaching Assistant (TA) *Feb. 2024 – Jun. 2024*

- Handled questions during TA hours and via email from 1,000 students and 1,000 auditors, in collaboration with 37 other TAs.
- Designed slides as teaching materials for an assignment, along with an LLM essay evaluation system, helping students practice and understand the concept of prompting, in collaboration with two other TAs.

INTERNSHIP

NTU Y.L. Lin Program, Taiwan FactCheck Center **Taipei, Taiwan**

Collaboration Intern *Dec. 2023 – May 2024*

- Designed an AI Media Literacy Web Game to address misinformation and enhance public understanding of AI.
- Conducted user research via individual interviews with 15 people to improve the interface design, gameflow, and effectiveness.

Solution Engineer Team, Synopsys Taiwan Co. **Hsinchu, Taiwan**

Technical-Engineering Intern *Jul. 2023 – Aug. 2023*

- Completed debugging of four sets of Process Design Kits (PDKs) with a teammate, each encompassing both Schematic-versus-Schematic (SvS) and Layout-versus-Layout (LvL) analyses.
- Utilized Python and TCL programming languages, alongside Custom Compiler, to inspect the callback functions of PDKs.

AWARDS & ACADEMIC SERVICE

Runner-Up Award, *Student Games Competition of the Conference on Human Factors in Computing Systems (CHI)* *May 2024*

Outstanding Service Award, *NTU Department of Electrical Engineering* *Dec. 2021*

Excellence Award, *Architecture Video Storytelling Project of NCKU Department of Architecture* *Feb. 2020*

Volunteer, *Diversity, Equity and Inclusion (DEI) Scholarship Program, COLM* *Oct. 2024*

Reviewer, *Spoken Language Technology Workshop, IEEE* *Jul. 2024*

SKILLS

- **Spoken Language**: English(Fluent), Mandarin(Native), Taiwanese(Native)
- **Programming Language**: C++, Python, TCL, HTML/CSS