# Xu (Oscar) Li

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## EDUCATION

**Northeastern University,** Boston, MA — May, 2026 (Expected)

Bachelor of Science in Computer Science — GPA: 4.00

Major Courses: Machine Learning and Data Mining, Artificial Intelligence, Object-Oriented Design, Algorithms and Data, Database Design, Probability and Statistic

## PROFESSIONAL EXPERIENCE

**Northeastern University** — Boston, United States

*Research Assistant| ChatsLab supervised by Prof WeiYan Shi* — Dec 2024 - Present

Project: LLM Persuasion Arena (Undergoing)

- Arena is a platform where user can test different persuasion techniques in a simulated conversation with different LLM agents; These agents are based on different models and can be used to test different strategies.
- Implemented personalization module, allow users to customize the persona for a LLM agent (i.e. Age, income, personalities), the agent will strictly follow the persona during the conversation.
- Developed a new evaluation matrix for the judge of the conversiation, allow user to test LLM's ability as personalized judge and its ability to estimate user's persona based on conversation history
- Future direction: LLM jail breaker

**University of Electronic Science and Technology of China (UESTC)** — Chengdu, China

*Research Assistant| International Lab of Intelligent Information Processing and Wavelet Analysis.* — June 2024 - Present

Project: Multi-modal model used for Earthquake prediction (Undergoing)

- Developed a framework that integrates diverse seismic data sources into a unified AI-driven system to improve earthquake detection, real-time monitoring, early warning, and disaster risk reduction and preparedness.
- Weights each source in modality Seismic Waveforms (image), Accelerometer Data and other data (text), aims to improve accuracy and responsiveness in dynamic seismic environments..

Project: Exploring the effect for different feature enhancement method on wild animal differentiation.

- Built and trained models to classify 90 different species of animals, the best model achieved 92.2% of accuracy.
- Applied CBAM, DANet and BAM separately to enhance the extracted features and analyze their performance.
- Publication: "Exploring the effect of different features enhancement methods on wild animal classification" (Accepted by 21th International Computer Conference on Wavelet Active Media Technology and Information Processing)

**Algorithms for Big Data Models and Applications** — Remote

*Team Member | Mentor: Prof. David.P. Woodruff, Carnegie Mellon University* — August, 2024 – October, 2024

- Conducted an in-depth literature review on landmark recognition/retrieval, analyzing recent advancements, key challenges, and emerging trends within CNN and Hybrid model.
- Evaluated and synthesized findings, categorizing sources based on their themes to highlight contrasts and convergence in approaches.
- Publication "Recent advancements in Landmark Recognition & Retrieval Across Diverse Models: A survey" (Under Review)

**Multi-Dimensional Applications of Machine Learning and Deep Learning** — Remote

*Team Leader | Mentor: Prof. Bjorn Schuller, Imperial College London* — July, 2024 - September, 2024

- Designed and implemented a Multi-modal model CFNSR-MAFNet with cross-modal/hybrid fusion for emotion recognition in Ravdess dataset. Achieved 78.3% of accuracy.
- Used MFCCs to extract features from the audio and ResNext for video, features will then be combined by a cross-modal block and finally pass to multi-head attention.
- Publication: "Enhancing Video-Based Emotion Recognition with Multi-Head Attention and Modality Dropout." (Accepted by the 2nd International Conference on Machine Learning and Automation (CONF-MLA 2024))

**Al Deep Learning and Causality-Artificial Intelligence and Deep Learning Specialization** — Remote

*Team Member | Mentor: Prof. Nicholas Lane, University of Cambridge* — July, 2023 - August, 2023

- Designed and implemented a lightweight CNN model that used to do the "Classification of Dogs and Cats" focus on efficiency and performance, Ideal for resource-constrained environments with commendable accuracy.

- Publication: Li, X. (2024). Exploring the effect of depth and width of CNN models on binary classification of dogs and cats. *Applied and Computational Engineering*.

**Big Data Department of China Unicom (Shandong) Industrial Internet Co., Ltd.** Jinan, China

*Intern Engineer* August, 2020

- Participated in early data research, focusing on data fusion, mining, and platform construction.
- Gained an understanding of the specific tasks and application scenarios of various teams within the Big Data Department. The department provides cross-industry data fusion capabilities, data mining and governance, data platform construction, data operational services, and data application delivery for government and enterprise clients.
- Acquired knowledge of technologies required for data analysis and mining, including web standards (HTML, CSS, JavaScript) and frameworks such as Vue.js, React, and AngularJS.

## PROJECTS EXPERIENCE

**Reversi | Java** October, 2023 - December, 2023

- Developed an interactive digital version of the classic board game Reversi. The project involved designing the game logic, user interface, and implementing AI for single-player mode.
- Applied the Object-Oriented design principles on it.

**Klondike | Java** September, 2023 - October, 2023

- Developed a digital version of the classic Klondike Solitaire game. This project involved the design of its logic and visualize it.
- Applied the Object-Oriented design principles on it.

## SKILLS

- Technical Skills: Java, Kotlin, Python, SQL.
- Languages: Chinese (Native), English (Advanced, barrier-free business communication), Japanese (Limited working proficiency)
- Test Score: GRE: 334, TOEFL: 110