

Xing Yi (Peter) Liu

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EDUCATION	Columbia University , New York, NY, United States M.S. in Computer Science, Machine Learning Track	Feb 2023
	University of California, Los Angeles , Los Angeles, CA, United States B.A.Sc. in Applied Mathematics (with Specialization in Computing) and Business Economics	Jun 2021
POSITIONS HELD	Tsinghua University , Beijing, China <i>Research Intern</i> , Institute for AI Industry Research	Mar 2023 – Current
	Columbia University , New York, NY, United States <i>Head Teaching Assistant</i> , COMS W3203, Discrete Mathematics, Prof. Tony Dear <i>Teaching Assistant</i> , COMS W4701, Artificial Intelligence, Prof. Tony Dear <i>Teaching Assistant</i> , COMS W4701, Artificial Intelligence, Prof. Tony Dear	Fall 2022 Summer 2022 Spring 2022
	Bedrock Industries , Shanghai, China <i>Data Analyst Intern</i>	Dec 2019
	CITIC Securities , Beijing, China <i>Investment Banking Intern</i> , Health Services Group	Aug 2018 – Sep 2018
PUBLICATIONS	<p>[1] Yizhen Luo, Kai Yang, Massimo Hong, Xing Yi Liu, Zaiqing Nie. “MolFM: A Multimodal Molecular Foundation Model.” In preprint, 2023.</p> <p>[2] Xing Yi Liu and Homayoon Beigi. “Efficient Ensemble Architecture for Multimodal Acoustic and Textual Embeddings in Punctuation Restoration using Time-Delay Neural Networks.” Recognition Technologies Technical Report 2023.</p> <p>[3] Anqi Cui, Guangyu Feng, Borui Ye, Kun Xiong, Xing Yi Liu, and Ming Li. “UWNLP at the NTCIR-12 Short Text Conversation Task.” Proceedings of the 12th NTCIR Conference on Evaluation of Information Access Technologies 2016.</p>	
UNPUBLISHED RESEARCH	Peptide Quantification <i>Supervisor: Prof. Ming Li, University of Waterloo</i> <ul style="list-style-type: none">• Determining relative abundance of specific peptides in biological samples using machine learning• Aggregating varying peptide amounts detected in different replicates of the same dilution sample• Adopting PointIso for peptide feature detection from liquid chromatography mass spectrometry maps	Jul 2022 – Current
	Improving the Efficiency of Multimodal Punctuation Restoration <i>Supervisor: Prof. Homayoon Beigi, Columbia University</i> <ul style="list-style-type: none">• Extending our work in publication [1] by performing ablation studies and further shrinking model size• Experimenting with linear discriminant analysis for dimensionality reduction of multimodal features• Studying the effect of jointly training multimodal fusion layers with acoustic and/or text encoders	Mar 2023 – Current
	Descriptive Semantic Image Translation with FlexIT <i>Supervisor: Prof. Iddo Drori, Columbia University</i> <ul style="list-style-type: none">• Proposing a novel framework for translating objects in images using natural language descriptors• Extending FlexIT (CVPR 2022) by introducing MDETR component for multimodal object detection• Achieving an LPIPS similarity score of 10.4 on the COCO-Stuff dataset, superior to FlexIT’s 24.7	Mar 2022 – May 2022