# Pinxin Liu (Andy)

Google Scholar

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## EDUCATION

- **Universiry of Rochester**                                                                                        NY, USA
  *Honor Bachelor of Science - Computer Science; GPA: 3.96/4.0*                              *July 2020 - May 2024*
  **Courses:** *Advanced Computer Vision, Natural Language Processing, Advanced Algorithms, Machine Learning, Frontiers in Deep Learning, Statistical Speech & Language Processing, Computer Organization, Operations Research, Programming Languages &Design, Data Mining, Computer Models & Limitations, Independent Study-Honors, Optimization for Machine Learning*

## PUBLICATIONS

- **ICASSP 2024**: Song, Luchuan*, **Pinxin Liu***, Guojun Yin, and Chenliang Xu. "Adaptive Super Resolution For One-Shot Talking-Head Generation" ICASSP 2024 [Demo Video] [Project]
- **Preprint, In submission**: **Liu, Pinxin***, Luchuan Song*, Lele Chen, Celong Liu, and Chenliang Xu. "Tri$^2$-plane: Volumetric Avatar Reconstruction with Feature Pyramid" [Demo Video] [Paper]
- **Preprint, In submission**: **Liu, Pinxin***, Luchuan Song*, Daoan Zhang, Hang Hua, Yunlong Tang, Huaijin Tu, Jiebo Luo and Chenliang Xu. "Emo-Avatar: Efficient Monocular Video Style Avatar through Texture Rendering" [Paper]
- **In submission**: Song, Luchuan*, **Pinxin Liu***, Lele Chen, and Chenliang Xu. "Artistic Renderer: Describe Drivable Portrait with Instructions" AAAI 2024 [Demo Video]
- **AAAI Workshop 2023**: Wang, Hecong , Erqian Xu, **Pinxin Liu**, Zijian Meng, and Zhen Bai. "Contextualized Multi-Step Commonsense Reasoning through Context Extension." R2HCAI: The AAAI 2023 Workshop on Representation Learning for Responsible Human-Centric AI
- **IJERPH 2023**: Lou, Xubin*, **Pinxin Liu***, Zidian Xie, and Dongmei Li. "Public Perceptions on the Policy of Electronic Cigarettes as Medical Products on Twitter." International Journal of Environmental Research and Public Health
- **NTR 2024**: Zidian Xie, Shijian Deng, **Liu, Pinxin**, Xubin Lou, Chenliang Xu, Dongmei Li. "Characterizing anti-vaping posts for effective communication on Instagram using multimodal deep learning" Nicotine and Tobacco Research [Paper]
- **SRNT 2024 [To appeal]**: **Liu, Pinxin***, Xubin Lou*, Zidian Xie, and Dongmei Li. "Public Perceptions and Discussions of the FDA JUUL Ban Policy on Twitter." The Society for Research on Nicotine & Tobacco 2024

## SERVICES

- **Conference Reviewer**:
  CVPR 2024, EMNLP 2023, ACM SIGKDD 2023, AAAI 2024
- **Teaching Assistance**:
  Machine Vision (CSC 249&449), University of Rochester, Spring 2024
  Machine Learning (CSC 246&446), University of Rochester, Fall 2023
  Natural Language Processing (CSC 247&447), University of Rochester, Spring 2023
  Statistical Speech & Language Processing (CSC 248&448), University of Rochester, Fall 2022
  Discrete Mathematics (MATH 150), University of Rochester, Spring 2022
- **Club Organization**:
  CSUG (Computer Science Undergrad Council) Tutor, Club Co-Leader, Fall 2022 - Spring 2022

## PROJECTS

- **Deate Evaluation with LLM**: Identify and reduce the bias, extractively summarize, model interactions between debaters, and evaluate the debate with Large Langauge Models, **submitted to ACL 2024**
- **Text-2-4D**: (Work in progress) Distill prior knowledge from Text2Image diffusion model for gaussian splitting 4D dynamic rendering incorporating MPM for physical property injection into the deformation of the point cloud
- **Video Event Dependency**: (Work in progress) Training LLAMA on egocentric videos for video grounding, identify the biases that in incorrectly understanding object and event relations, calibrate the model's attention on identifying important events and objects to align it with human inductive biases
- **Differential Expression Analysis**: (Work in progress) Build a self-supervised representation framework to learn the inter and intra-relation between single-cell RNA expression and predict the differentially expressed genes
- **Single Cell Domain Translation**: Led the team build a VAE model that helps translate scRNA to scATAC data, analyze the model activation and explainability of the model for transcriptomic and epigenomic domain correlation, advised by Prof.Manolis Kellis, [report] [slides] [video]

## HONORS AND AWARDS

- Dean List - All four years at U of Rochester
- Honor in Mathematic Competition in Modeling (MCM) - Jan 2021

## SKILLS

- **Languages**:        Python, PHP, C++, JavaScript, SQL, Bash, JAVA
- **Frameworks**:     Scikit, NLTK, SpaCy, TensorFlow, Keras, Django, Flask, NodeJS, LAMP
- **Tools**:               GIT, PostgreSQL, MySQL, SQLite
- **Platforms**:        Linux, Web, Windows, Arduino, Raspberry, AWS