# Lingxiao Li

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## EDUCATION

**Columbia University in the City of New York** **New York, NY**
*Master of Science in Computer Science* *May 2022*

- GPA: 3.67/4.0
- Courses: Natural Language Processing, Advanced Algorithm, Machine Learning, Computer Vision II

**University of Liverpool** **Liverpool, UK**
*Bachelor of Science in Computer Science* *May 2020*

- GPA: 3.89/4.0
- Courses: Linear Algebra, Data Structures, Artificial Intelligence, Computer Vision, Data Mining and Visualization

## RESEARCH EXPERIENCE

**Monitoring and Adapting to Domain Shift Across Millions of Edge Devices**
*Research Assistant (Advisor: Prof. Junfeng Yang and Prof. Asaf Cidon), Columbia University* *Jan 2022-present*

**Description:** Monitor and adopt domain shifts at scale in the post-deployment phase to maintain a healthy and functional deep learning system.

- Design and implement drift detection algorithms based on Kolmogorov–Smirnov, and Kullback–Leibler divergence for millions of edge devices. Evaluate machine learning model performance across different image classification datasets including Office-31, Caltech-256, VOC2012, etc.
- Develop imageNet online streaming dataset with other team members to simulate real-world out-of-distribution data streaming.

**Hyperbolic Attribute Editing for Few-shot Image Generation**
*Research Assistant (Advisor: Prof. Shuhui Wang), ICT, Chinese Academy of Sciences* *August 2021-present*

**Description:** This research focus on generating diverse images for an unseen category given only few images.

- Achieve state-of-the-art few-shot image generation using GAN (Generative Adversarial Network) inversion to manipulate latent codes in non-Euclidean space.
- Paper submitted to CVPR 2023(under review), arxiv preprint coming soon

## PROJECTS

**Cloud Enhanced Open Software Defined Mobile Wireless Testbed for City-Scale Deployment (COSMOS)**
*Research Assistant, ZKLab (Advisor: Prof. Zoran Kostic), Columbia University* *May 2021-Dec 2021*

- Deployed and trained a customized YOLOv4 on Google Cloud Platform to track small objects in video from 12$^{th}$ floor eye bird camera, decorrelated the confounder in the training dataset to improve the accuracy of the detection
- Deployed DeepSORT and achieved an average over 95% counting accuracy for vehicles
- Wrote weekly report, managed Github repository, cooperated with 10+ team members

**Natural Language Processing Chatbot**
*University of Liverpool* *February 2019-May 2019*

- Created an interpreter with RASA-NLU from Python; trained the interpreter with JSON data type
- Tested if the chatbot could efficiently help users to arrange schedules; the experiment result showed the chatbot can help users manage schedules with high accuracy

## SKILLS

- **Languages (Proficient)**: Python, Java, SQL
- **Frameworks (Proficient)**: Pytorch, OpenCV, TensorFlow.
- **Volunteer:** Primary School Teacher, AIESEC Overseas Volunteer Program in Colombo, Sri Lanka, 2017
- **Interests**: Classical Music, Trumpet, History