# Xiao CHEN

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## Research Interest

My reseach interest lies in **Trustworthy Generative Models** (Robustness, Fairness) and **Controllable image/video processing**. My ultimate research goal is to develop trustworthy generative models. To achieve this, I am focusing on three key steps: (1) **Understanding the intrinsic knowledge** embedded in generative models: This involves exploring what these models already know and identifying their current limitations. (2) Leveraging this intrinsic knowledge to enhance image and video processing tasks, and improve the **controllability of these tasks**. (3) **Enhancing the fairness and robustness of generative models**, make models more resilient against adversarial attacks and ensuring they produce unbiased outputs.

## Education

- **The Hong Kong Polytechnic University** *2022-Now*
  *Ph.D. candidate in Computer Science* Advisor: Qing Li, Zhaoxiang Zhang
- **Zhejiang University** *2017-2020*
  *M.Eng. in Computer Science* GPA: 3.9/4.0, Rank: 2/35
- **Northwestern Polytechnical University** *2013-2017*
  *B.Eng. in Software Engineering* GPA: 3.7/4.0, Rank: 2/235

## Leaded Projects

- **Towards Flexible Interactive Reflection Removal with Human Guidance** *Arxiv 2024*
  ***Xiao Chen**, Xudong Jiang, Zhen Lei, Qing Li, Chenyang Lei, Zhaoxiang Zhang*
  - In this project, we reveal the potential of SAM in robust reflection recognition.
  - We curate an open-sourced interactive reflection removal dataset and build a novel mask-guided reflection removal network, achieving SOTA reflection removal performance and reduces human annotations from 50 inputs to 3-4 inputs
- **Fairly Adaptive Negative Sampling for Recommendations** *The WebConf 2023 (CCFA)*
  ***Xiao Chen**, Wenqi Fan, Jingfan Chen, Zhaoxiang Zhang, Qing Li*
  - In this project, we build a novel adaptive negative sampling method with bi-level optimization, which contributes fair and accurate implicit recommendations
  - We revisit the commonly used uniform negative sampling techniques in recommender systems and find that they unwarrantedly discriminate against major item groups
- **A Comprehensive Survey on Trustworthy Recommender Systems** *Arxiv 2023*
  *Wenqi Fan, Xiangyu Zhao, **Xiao Chen**, Qing Li*
  - In this project, we present an overview of the current research landscape in Trustworthy Recommender Systems
  - We study the following key dimensions: Robustness, Fairness, Explainability, Privacy and etc
- **A dual-attention dilated residual network for liver lesion classification and localization** *ICIP 2019*
  ***Xiao Chen**, Yen-wei Chen, Lanfen Lin*
  - In this project, we devise self-attention mechanisms for enhancing lesion classification and localization performance.

## Academical Services

**Tutorial:** Trustworthy Recommender Systems: Foundations and Frontiers in KDD, WWW, IJCAI 2023
**Reviewer:** NeurIPS, ACM MM, ECCV, AAAI, TKDD, TAI

## Awards

- **Outstanding Graduate Student in Zhejiang Province** *2020*
- **Merit Student & Excellent Student Cadre in ZJU** *2018,2019*
- **Chiang Chen Scholarship** *2018*
- **National Scholarship** *2016*
- **First Prize in Asian Super Computer Competition** *2016*