

Yicun Liu

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EDUCATION

Columbia University

M.S IN COMPUTER SCIENCE

Grad. Dec 2019 | New York, NY

cGPA: 3.8/4.0

The Chinese University Of
Hong Kong

B.E IN INFORMATION ENGINEERING

Grad. May 2018 | Hong Kong

cGPA: 3.7/4.0

COURSEWORK

GRADUATE

Machine Learning

Database Systems

Algorithm Analysis

Distributed Systems

Adv. Computer Vision

Adv. Robotics Learning

Natural Language Processing

UNDERGRADUATE

Cyber Security and Cryptography

Human-Computer Interaction

Web-scale Info Analytics

Computational Finance

Computer Networks

Artificial Intelligence

Embedded Systems

Operating Systems

SKILLS

PROGRAMMING

C++ • Python • Go • Java • Scala

ML FRAMEWORK

Tensorflow • PyTorch • Caffe

SERVICE

TEACHING

Computer Vision (CS4731, 19 Fall)

REVIEWING

IEEE WACV (2020, Second Round)

SELECTED AWARDS

GRA Fellowship, **full tuition waiver** | 18

Mr. Michael Wong Scholarship | 17

Hitachi Limited (HK) Scholarship | 17

ELITE Research Scholarship | 17

WORK EXPERIENCE

Twitter, Cortex Applied Research

Feb 2020 - Present

RESEARCH ENGINEER

San Francisco, CA

- Working on improving **recommender systems** for Twitter's Home Timeline.
- Working on neural embedding **compression**. Work to appear in **RecSys'20**.

Yahoo!, Paranoids Engineering

June 2019 - Aug 2019

SOFTWARE ENGINEER INTERN

Sunnyvale, CA

- Developed **decentralized data service** for various teams. Built **Go** modules for job scheduling and performance metrics collection with **Hadoop** clusters.
- Prototyped an identity system as demo of secure software lifecycle. Implemented **50%** RESTful APIs in **Java** with **unit** and **functional tests**.

SenseTime, X Pixel Group

May 2017 - July 2018

RESEARCH INTERN

Hong Kong

- Designed a **selfie-friendly neural style** algorithm with high fidelity in skin color and facial structure. Product deployed on **Android**. Work published in **ACML'18**.
- Designed a **stereo matching** framework for imbalanced binocular signals. Proposed a robust **view synthesis** framework for fine-grained objects with CUDA-backed computing layer. Work published in **WACV'20** and **CVPR'20**.
- Developed a **deblur** framework specifically for facial images by synthesizing **sketch images** for the deblur process. Work published in **AAAI'20**.
- Developed a facial **depth estimation** network for **Infrared** and **RGB** cameras in very dark environment. Exceeded SotA by **30%+**. Work to appear in **CVIU'20**.

RESEARCH EXPERIENCE

Columbia Vision+Graphics Lab

Sept 2018 - Dec 2019

RESEARCH ASSISTANT

New York, NY

- Built a unified system for analyzing **user preferences** across **affinity groups** towards international news events. Programmed efficient **web spiders** to crawl **20K** user-generated multimedia contents from **10+** video sharing sites.
- Designed state-of-the-art **multimedia retrieval** models to compare **multimodal** vision and language features using **deep canonical embedding**. Experimented with **video recommendations** based on user's cultural affinities.

CUHK Multimedia Lab

Sept 2017 - Dec 2017

RESEARCH ASSISTANT

Hong Kong

- Dived deep into investigating the divergence of **resolution/noise/color** between mobile phones and DSLRs. Established RAW-based enhancing pipeline. Constructed Star-GAN based **image enhancement** framework.

PUBLICATIONS

<i>Model Size Reduction Using Frequency Based Double Hashing</i>	RecSys'20
<i>Visually Imbalanced Stereo Matching</i>	CVPR'20
<i>Learning to Deblur Face Images via Sketch Synthesis</i>	AAAI'20
<i>Cross-Modal Stereo Matching for Facial Estimation in the Dark</i>	CVIU'20
<i>Self-Guided Novel View Synthesis via Elastic Displacement Network</i>	WACV'20
<i>Learning Selfie-Friendly Abstractions from Artistic Style Images</i>	ACML'18