

ANTHONY CHEN

Date of Birth: 15 Nov. 2001 | **Gender:** Male | **Nationality:** United Kingdom

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EDUCATION

Sept. 2019 - June 2023: School of Electronics Engineering and Computer Science, Peking University, Beijing, China.

Specialty: Intelligence Science and Technology

GPA: 3.3/4.0, B.S. degree (to be awarded 2023)

Chinese Government Scholarship (2020-2022)

RESEARCH PROJECT AND INTERNSHIP

Feb 2022 - present: Research Student, at School of Computer Science, Peking University.

Project title: PiMAE: Point cloud and Image Interactive Masked AutoEncoders for 3D Object Detection

Supervisor: Prof. Z. Shanghang, School of Computer Science, Peking University

Research work includes:

- Review and analysis of more than 40 advanced research work in literature related to Masked Autoencoders, Multi-model Learning, 3D Object Detection
- Design and programming (in Pytorch) of a deep learning model with Masked Autoencoders design which performs interaction between point clouds and images and reconstructs them simultaneously
- Extensive experiments based on different 3D Object Detection methods in order to show pre-training effectiveness. Achievement of 2.9% (AP_{50}) performance gain to the state-of-the-art methods
- Publication of the work has been submitted to CVPR2023. Title of publication: *PiMAE: Point Cloud and Image Interactive Masked Autoencoders for 3D Object Detection*

Jul 2022 - Oct 2022: Computer Vision Engineering Internship. AI Department, BodyPark Inc. Beijing, China

The work involved improving 2D human pose estimation results from deep learning networks to provide online fitness training.

Research work includes:

- Review and analysis of estimation problems of the current online model

- Conversion of newly published advanced work on 2D human pose estimation into practical applications and fine-tuning of model on custom dataset
- Design of algorithms specifically for application scenarios. Outcome: model performance improved by 6% (AP); problems solved of previous algorithms, providing a reliable solution to real-world business challenges

PUBLICATIONS

Anthony Chen*, Kevin Zhang*, Zihan Wang, Renrui Zhang, Yuheng Lu, Yandong Guo, Shanghang Zhang. *PiMAE: Point Cloud and Image Interactive Masked Autoencoders for 3D Object Detection*. 2022. (Submitted to CVPR2023)
<https://antonioo-c.github.io/files/PiMAE.pdf>

LEADERSHIP EXPERIENCE

Apr 2021 – Present: Geeklab (student league)

Workshop founder of GeekSports, Beijing, China. The workshop provides courses in niche sports such as skiing, skateboarding, and frisbee.

SKILLS, INTERESTS & OTHERS

Computing Skills: Python, Pytorch, C++, HTML5, CSS, JavaScript, SQL

Languages: Mandarin (Native), English (Native), Japanese (Proficient), Ukrainian(Fluent), Cantonese (Fluent)

Interests: Baseball (school team member), Volleyball (school team member, 1st prize in Beijing Collegiate), Skiing, Skate Boarding, Cryptocurrency Trading

REFERENCES

Professor Siwei Ma

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