Tongxu ZHANG

EDUCATION

University of Macau Aug. 2025 – Sept. 2025
Quit from Doctor of Philosophy Program *Taipa, Macau SAR*

The Hong Kong Polytechnic University Sept. 2023 – Jul. 2024
Master of Science in Biomedical Engineering, GPA 3.49/4.3 *Kowloon, Hong Kong SAR*

East China University of Science and Technology Sept. 2019 – Jun. 2023
Bachelor of Engineering in Automation, GPA 3.48/4 *Shanghai, China*

WORK EXPERIENCE

The Hong Kong Polytechnic University Oct. 2025 – Apr. 2026
Research Assistant *Kowloon, Hong Kong SAR*
- Supervisor: Ir. Dr. Aaron LEUNG and Prof. Amy FU

The Hong Kong Polytechnic University Oct. 2023 – Jul. 2025
Research Assistant *Kowloon, Hong Kong SAR*
- Supervisor: Ir. Dr. Aaron LEUNG and Prof. Amy FU

Insta360 Jun. 2022 – Aug. 2022
Intern of Deep Learning *Shenzhen, China*
- Optimize the self-developed aesthetic model for evaluating image aesthetics

RESEARCH EXPERIENCE

PET/MRI partial volume correction for alzheimer's disease
Aug. 2025 – Sept. 2025
- Realize PVC correction of PET through deep learning, obtain ADNI data, preprocess it with Freesurfer, and reproduce relevant deep learning papers

Auricular acupressure device for sports recovery
Oct. 2023 – Jul. 2025
- Responsible for collecting the data by 3D scanning, and building the ear splint model by CAD for auricular acupressure manual device by 3D printing

Catalytic mechanism of novel fungal sesquiterpene synthase based on machine learning
May 2021 – Sept. 2022
- Responsible for the theoretical research of the project, the establishment and implementation of the project implementation design, and the resolution of code conflicts.

Velocity and position measurement of droplet-based microfluidics based on YOLOv5
Oct. 2021 – Dec. 2021
- Responsible for labeling the images and debugging code for estimating position of droplet.

PUBLICATION

IEEE BIBM 2025 *Accepted, CCF-B Conference*
- **Tongxu ZHANG**, Zhiming LIANG & Bei WANG (2025). A Survey of Medical Point Cloud Shape Learning: Registration, Reconstruction and Variation. arXiv preprint arXiv:2508.03057.

IEEE BIBM 2025 *Accepted, CCF-B Conference*
- **Tongxu ZHANG** & Bei WANG (2025). Med-PU: Point Cloud Upsampling for High-Fidelity 3D Medical Shape Reconstruction. arXiv preprint arXiv:2501.16716.

Computer Vision and Image Understanding *SCI Q2, CCF-B Journal*
- **Tongxu ZHANG** & Bei WANG (2025). Representation Learning of Point Cloud Upsampling in Global and Local Inputs

ICMLC 2025 *EI Conference*
- **Tongxu ZHANG** (2024). Rethinking Data Input for Point Cloud Upsampling

ICANN 2023 *CCF-C Conference*
- **Tongxu ZHANG** & Bei WANG (2023). Contrastive Learning for Sleep Staging based on Inter Subject Correlation

Awards

Outstanding graduates   Jun. 2023
Awarded by East China University of Science and Technology
Outstanding dissertations   Jun. 2023
Awarded by East China University of Science and Technology
School Scholarship   Sept. 2020
Awarded by East China University of Science and Technology

Professional Service

PRCV 2025: Reviewer

Skills & Interests

Skills: Python, Pytorch, Matlab, Linux, Blender, CAD
Interests: Computer Vision, 3D Vision, Healthcare, Large Multimodality Model

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