Tongxu ZHANG

EDUCATION

University of Macau   Aug. 2025 – Jun. 2029 (Pending)
Doctor of Philosophy in Electrical and Computer Engineering   *Taipa, Macau SAR*
- Supervisor: Prof. Greta MOK

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*
- Supervisor: Prof. Bei WANG

WORK EXPERIENCE

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

East China University of Science and Technology   Sep. 2024 – Feb. 2025
Remote Visiting Student   *Shanghai, China*
- Supervisor: Prof. Bei WANG

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

RESEARCH EXPERIENCE

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

3D point cloud study for medical imaging
Sep. 2024 – Feb. 2025
- Responsible for data cleaning, model training, and paper writing

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

Under Review   *Submitted*
- **Zhang, T.**, & Wang, B. (2025). Point Cloud Upsampling as Statistical Shape Model for Pelvic. arXiv preprint arXiv:2501.16716.

Under Review   *Submitted*
- **Zhang, T.**, & Wang, B. (2025). Representation Learning of Point Cloud Upsampling in Global and Local Inputs. arXiv preprint arXiv:2501.07076.

Under Review   *Submitted*
- **Zhang, T.** (2024). Rethinking Data Input for Point Cloud Upsampling. arXiv preprint arXiv:2407.04476.

ICANN 2023   *CCF-C Conference*
- **Zhang, T.**, & Wang, B. (2023, September). Contrastive Learning for Sleep Staging based on Inter Subject Correlation. In International Conference on Artificial Neural Networks (pp. 343-355). Cham: Springer Nature Switzerland.

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

Skills & Interests

Skills: Python, Pytorch, Matlab, Linux, Segmentation, CAD

Interests: Computer Vision, 3D Vision, Medical Image, Healthcare, Large Multimodality Model

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