

# Muxin Wei

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## OBJECTIVE

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An experienced deep learning (DL) researcher with extensive academic, practical knowledge and high-impact publications. Specialization in medical image analysis for segmentation & multimodal learning, with extensive understanding of architectural and training paradigms. Actively looking for opportunities as a ML/DL researcher or Data Scientist.

## EDUCATION

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**Harbin Institute of Technology** Sep. 2023 – Present  
M.Sc., Biomedical Engineering Harbin, China

**Dongguang University of Technology** Sep. 2018 – Jun. 2022  
B.Eng., Computer Science and Technology Dongguang, China

## PUBLICATIONS

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– **Wei, M., Chen, S., Wu, S., & Xu, D. (2024).**Rep-MedSAM: Towards Real-time and Universal Medical Image Segmentation. (CVPR 2024 Workshop: Segment Anything In Medical Images On Laptop.)

## RESEARCH EXPERIENCE

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**CVPR 2024 Challenge: Segment Anything In Medical Images On Laptop** May. 2024 – Jun. 2024  
Leader

- Proposed an efficient knowledge distillation framework and achieved great results on the validation set after distillation.
- Adapted lightweight architectures for the resource-limited environment to promote model inference speed by almost  $2\times$  for semantic segmentation in medical images.
- Increased inference speed for 3D volume with multi-object  $2\times$  by caching in slices.
- Curated over 10 datasets across different modalities.

## CONFERENCE ACTIVITY

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**CVPR 2024 Workshop on Foundation Models For Medical Vision**  
– Oral presentation for summary of our method and results analysis for the challenge.

## SKILLS

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**Programming Language:** Python, C/C++,  $\text{\LaTeX}$ , Markdown

**ML/DL:** PyTorch, NumPy, Pandas, Scikit-Learn

**Tools:** Linux, Git, Docker, OpenCV, SimpleITK

**Relevant Courses:** Artificial Intelligence and Its Application, Machine Learning Theory and Algorithms, Advanced Pattern Recognition Technique, Biological Big Data Analysis

**Language:** Chinese, English